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| 1 | 38 | (heparinase adj III) or (heparinase adj "3") | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 12:57 |
| 7 | 1 | ((heparinase adj III) or (heparinase adj "3")) near3 (mutant or mutation) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 12:57 |
| 13 | 3 | ((heparinase adj III) or (heparinase adj "3")) near3 (product) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 12:57 |
| 19 | 3 | ((heparinase adj III) or (heparinase adj "3")) near3 (mutant or mutation)) or ((heparinase adj III) or (heparinase adj "3")) near3 (product)) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:00 |
| 25 | 11 | ((heparinase adj III) or (heparinase adj "3")) near3 (activity or kinetic or kcat) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:01 |
| 31 | 4283 | ((heparinase adj III) or (heparinase adj "3")) near3 (mutant or mutation)) or "111" | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:02 |
| 37 | 11 | ((heparinase adj III) or (heparinase adj "3")) near3 (mutant or mutation)) or ((heparinase adj III) or (heparinase adj "3")) near3 (activity or kinetic or kcat)) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:24 |
| 43 | 85 | ((heparinase adj III) or (heparinase adj "3")) or (heparin adj like adj glycosaminoglycans) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:25 |
| 49 | 2 | ((heparinase adj III) or (heparinase adj "3")) or (heparin adj like adj glycosaminoglycans)) near3 (targeting adj molecule) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:25 |
| 55 | 1 | ((heparinase adj III) or (heparinase adj "3")) or (heparin adj like adj glycosaminoglycans)) near3 (target) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:26 |
| 61 | 3 | ((heparinase adj III) or (heparinase adj "3")) or (heparin adj like adj glycosaminoglycans)) near3 (targeting adj molecule)) or (((heparinase adj III) or (heparinase adj "3")) or (heparin adj like adj glycosaminoglycans)) near3 (target)) | USPAT; US-PGPUB; EPO; JPO; DERWENT | 2002/11/25 13:26 |

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FI US 2002122793 20020905

DT Utility; Patent Application - First Publication

FS CHEMICAL

APPLICATION

GOVI (0002) Some aspects of the invention were made with government support under NIH Contract No. GM57073. The government may have certain rights in the invention.

CLMN 60

GI 16 Figure(s).

FIG. 1 is a graph depicting the effect of DEPC inactivation of heparinase III on rate constant.

FIG. 2 is a graph depicting the pH dependence of the second order rate constant of inactivation upon incubation of heparinase III with varying concentrations of DEPC.

FIG. 3 is a graph depicting the quantification of DEPC-modified histidine residues in **heparinase III** over a period of time.

FIG. 4 is a graph depicting the substrate protection of heparinase III inactivation by DEPC III.

FIG. 5 is a reverse phase HPLC profile of a lys-C digest of heparinase III which was not exposed to DEPC (top panel) and a peptide profile of

heparinase III labeled with DEPC (bottom panel).
 FIG. 6 is a series of graphs depicting SAX analysis of exhaustive
 heparinase III digests of heparan sulfate. Heparan sulfate was digested
 with either heparinase III from *F. heparinum* (panel A), recombinant
heparinase III (panel B), H295A **mutant** enzyme
 (panel C), H510A mutant enzyme (panel D), or the H105A mutant enzyme
 (panel E).

FIG. 7 depicts a circular dichroism analysis of recombinant
heparinase III and the H295A **mutant** enzyme,
 and the H510A mutant enzyme.

FIG. 8 is a graph depicting tumor volume in mice, as well as mice treated
 with heparinase I.

FIG. 9 is a bar graph depicting number of lung nodules that developed 13
 days after tail vein injection of B16 BL6 cells. The cells were either
 treated with PBS, heparinase I, or heparinase III.

FIG. 10, panel A, depicts the tumor volume of mice that were treated with
 GAG fragments generated from treatment of B16 BL6 cells with either
 heparinase I, heparinase III, or PBS or fragments generated from
 heparinase I treatment of LLC cells. Tumor volume was measured over time
 between 7 and 15 days postinjection of the tumor cells.

FIG. 10, panel B is a bar graph which quantitates the number of lung
 nodules of the mice described in panel A.

FIG. 11 is a bar graph depicting the effect on B16 cellular migration and
 invasion of transfection with antisense 20ST in pcDNA3.1.

FIG. 12 shows bar graphs depicting the ability of the transfected cells of
 FIG. 12 to develop into primary tumors as assessed by mean tumor volume
 (12a) and tumor weight (12b).

FIG. 13 depicts the results of compositional analysis of HLGAG saccharide
 fragments released from B16BL6 cells.

FIG. 14 is a bar graph depicting FGF2 signaling modulated by HLGAG
 fragments

FIG. 15 is a table (15a) and a schematic depicting the modulation of FGF2
 activity in vivo by B16BL6 fragments (15b).

AB The invention relates to **heparinase III** and
mutants thereof. **Modified** forms of **heparinase**
III having reduced enzymatic activity which are useful for a
 variety of purposes, including sequencing of heparin-like
 glycosaminoglycans (HLGAGs), removing active heparan sulfate from a
 solution, inhibition of angiogenesis, etc. have been discovered according
 to the invention. The invention in other aspects relates to methods of
 treating cancer and inhibiting tumor cell growth and/or metastasis using
 heparinase III, or products produced by enzymatic cleavage by heparinase
 III of HLGAGs.

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TI Use of heparinase III in cancer treatment and inhibition of tumor cell
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 El-Shabrawi, Yosuf; Venkataraman, Ganesh; Sasisekharan, Ram

PA Massachusetts Institute of Technology, USA

SO PCT Int. Appl., 94 pp.

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FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | WO 2001066772 | A2 | 20010913 | WO 2001-US7464 | 20010308 |
| | WO 2001066772 | A3 | 20020502 | | |
| | W: | AU, CA, JP | | | |

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, TR

US 2002122793 A1 20020905 US 2001-802285 20010308

PRAI US 2000-187846P P 20000308

AB The invention relates to **heparinase III** and **mutants** thereof. **Modified** forms of **heparinase III** having reduced enzymic activity which are useful for a variety of purposes, including sequencing of heparin-like glycosaminoglycans (HLGAGs), removing active heparan sulfate from a soln., inhibition of angiogenesis, etc. have been discovered according to the invention. The invention in other aspects relates to methods of treating cancer and inhibiting tumor cell growth and/or metastasis using heparinase III, or products produced by enzymic cleavage by heparinase III of HLGAGs.

L5 ANSWER 3 OF 7 USPATFULL

AN 1999:75550 USPATFULL

TI Nucleic acid sequences and expression systems for heparinase II and heparinase III derived from Flavobacterium heparinum

IN Su, Hongsheng, Longnenil, Canada

Blain, Francoise, Que, Canada

Bennett, Clark, Quebec, Canada

Gu, Kangfu, Quebec, Canada

Zimmermann, Joseph, Elm Grove, WI, United States

Musil, Roy, Carlsbad, CA, United States

PA IBEX Technologies Corp., Malvern, PA, United States (U.S. corporation)

PI US 5919693 19990706

AI US 1997-900951 19970725 (8)

RLI Division of Ser. No. US 1994-258639, filed on 10 Jun 1994, now patented, Pat. No. US 5681733

DT Utility

FS Granted

EXNAM Primary Examiner: Prouty, Rebecca E.

LREP Hale & Dorr LLP

CLMN Number of Claims: 12

ECL Exemplary Claim: 1

DRWN 11 Drawing Figure(s); 11 Drawing Page(s)

LN.CNT 1605

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention describes the isolation and sequence of genes from Flavobacterium heparinum encoding heparin and heparan sulfate degrading enzymes, heparinase II and heparinase III (EC 4.2.2.8). It further describes a method of expressing and an expression for heparinases I, II and III using a modified ribosome binding region derived from a promoter from glycosaminoglycan lyase genes of F. heparinum. Also, a multi-step protein purification method incorporating cell disruption, cation exchange chromatography, affinity chromatography and hydroxylapatite chromatography is outlined. Antibodies against a post-translational modification moiety common to Flavobacterium heparinum proteins and a method to obtain antibodies specific to these moieties and to the amino acid sequences of heparinases I, II and III are described.

L5 ANSWER 4 OF 7 USPATFULL

AN 97:99186 USPATFULL

TI Nucleic acid sequences and expression systems for heparinase II and heparinase III derived from Flavobacterium heparinum

IN Su, Hongsheng, Longueuil, Canada

Blain, Francoise, Mtl., Canada

Bennett, Clark, Pierrefonds, Canada

Gu, Kangfu, D.D.O., Canada

Zimmermann, Joseph, Elm Grove, WI, United States

Musil, Roy, Carlsbad, CA, United States

PA Ibex Technologies, Montreal, Canada (non-U.S. corporation)

PI US 5681733 19971028
AI US 1994-258639 19940610 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Prouty, Rebecca E.
LREP Hale and Dorr LLP
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1467

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention describes the isolation and sequence of genes from *Flavobacterium heparinum* encoding heparin and heparan sulfate degrading enzymes, heparinase II and heparinase III (EC 4.2.2.8). It further describes a method of expressing and an expression for heparinases I, II and III using a modified ribosome binding region derived from a promoter from glycosaminoglycan lyase genes of *F. heparinum*. Also, a multi-step protein purification method incorporating cell disruption, cation exchange chromatography, affinity chromatography and hydroxylapatite chromatography is outlined. Antibodies against a post-translational modification moiety common to *Flavobacterium heparinum* proteins and a method to obtain antibodies specific to these moieties and to the amino acid sequences of heparinases I, II and III are described.

L5 ANSWER 5 OF 7 DGENE (C) 2002 THOMSON DERWENT

AN ABB06932 Peptide DGENE

TI Novel **modified heparinase III** polypeptides
useful for treating cancer and inhibiting tumor cell growth and/or metastasis, sequencing heparin-like glycosaminoglycans, and removing active heparan sulfate from solution -

IN Dongfang L; Pojasek K; Shriver Z; Holley K; El-Shabrawi Y; Venkataraman G; Sasisekharan R

PA (MASI) MASSACHUSETTS INST TECHNOLOGY.

PI WO 2001066772 A2 20010913 94p

AI WO 2001-US7464 20010308

PRAI US 2000-187846P 20000308

DT Patent

LA English

OS 2001-596840 [67]

AB The present sequence represents a *Flavobacterium heparinum* heparinase III (EC 4.2.2.8) peptide, which is used in an example from the present invention. The present invention describes a substantially pure **heparinase III (H) (modified (H)) (I)** having the amino acid sequence of mature *Flavobacterium heparinum* (see ABB06931), or having conservative substitutions within residues non-essential to enzymatic function such as His residue at positions 36, 105, 110, 139, 152, 225, 234, 241, 424, 469 or 539 that is substituted by Ala, Ser, Tyr, Thr or Lys residue. (I) has antitumour, cytostatic, antipsoriatic, antiarthritic, vasotropic, gynaecological, antiinflammatory, anticoagulant, ophthalmological, antidiabetic and cerebroprotective activities, and can be used as: a tumour cell proliferation or metastasis inhibitor; a neovascularisation or angiogenesis inhibitor; and a heparin-like glycosaminoglycans (HLGAG) cleavage mediator. (I) is useful for preventing proliferation of tumours such as prostate tumour or melanoma, and for preventing tumour cell metastasis. (I) is also useful for treating arthritis, psoriasis, diabetic retinopathy, chronic inflammation, scleroderma, prolonged mensuration and bleeding by inhibiting neovascularisation or angiogenesis. It is also useful for treating disorders associated with coagulation and so can be used in treating cerebral ischaemia and thromboembolic stroke. N.B. The sequence data for this patent is not represented in the printed specification but is based on sequence

information supplied by the European Patent Office.

L5 ANSWER 6 OF 7 DGENE (C) 2002 THOMSON DERWENT
AN ABB06931 Protein DGENE
TI Novel **modified heparinase III** polypeptides
useful for treating cancer and inhibiting tumor cell growth and/or
metastasis, sequencing heparin-like glycosaminoglycans, and removing
active heparan sulfate from solution -
IN Dongfang L; Pojasek K; Shriver Z; Holley K; El-Shabrawi Y; Venkataraman
G; Sasisekharan R
PA (MASI) MASSACHUSETTS INST TECHNOLOGY.
PI WO 2001066772 A2 20010913 94p
AI WO 2001-US7464 20010308
PRAI US 2000-187846P 20000308
DT Patent
LA English
OS 2001-596840 [67]
AB The present sequence represents *Flavobacterium heparinum* heparinase III
(EC 4.2.2.8). The present invention describes a substantially pure
heparinase III (H) (**modified** (H)) (I) having
the amino acid sequence of mature *Flavobacterium heparinum* (see
ABB06931), or having conservative substitutions within residues
non-essential to enzymatic function such as His residue at positions 36,
105, 110, 139, 152, 225, 234, 241, 424, 469 or 539 that is substituted by
Ala, Ser, Tyr, Thr or Lys residue. (I) has antitumour, cytostatic,
antipsoriatic, antiarthritic, vasotropic, gynaecological,
antiinflammatory, anticoagulant, ophthalmological, antidiabetic and
cerebroprotective activities, and can be used as: a tumour cell
proliferation or metastasis inhibitor; a neovascularisation or
angiogenesis inhibitor; and a heparin-like glycosaminoglycans (HLGAG)
cleavage mediator. (I) is useful for preventing proliferation of tumours
such as prostate tumour or melanoma, and for preventing tumour cell
metastasis. (I) is also useful for treating arthritis, psoriasis,
diabetic retinopathy, chronic inflammation, scleroderma, prolonged
mensuration and bleeding by inhibiting neovascularisation or
angiogenesis. It is also useful for treating disorders associated with
coagulation and so can be used in treating cerebral ischaemia and
thromboembolic stroke. N.B. The sequence data for this patent is not
represented in the printed specification but is based on sequence
information supplied by the European Patent Office.

L5 ANSWER 7 OF 7 DGENE (C) 2002 THOMSON DERWENT
AN ABL50563 DNA DGENE
TI Novel **modified heparinase III** polypeptides
useful for treating cancer and inhibiting tumor cell growth and/or
metastasis, sequencing heparin-like glycosaminoglycans, and removing
active heparan sulfate from solution -
IN Dongfang L; Pojasek K; Shriver Z; Holley K; El-Shabrawi Y; Venkataraman
G; Sasisekharan R
PA (MASI) MASSACHUSETTS INST TECHNOLOGY.
PI WO 2001066772 A2 20010913 94p
AI WO 2001-US7464 20010308
PRAI US 2000-187846P 20000308
DT Patent
LA English
OS 2001-596840 [67]
AB The present sequence encodes *Flavobacterium heparinum* heparinase III (EC
4.2.2.8). The present invention describes a substantially pure
heparinase III (H) (**modified** (H)) (I) having
the amino acid sequence of mature *Flavobacterium heparinum* (see
ABB06931), or having conservative substitutions within residues
non-essential to enzymatic function such as His residue at positions 36,

105, 110, 139, 152, 225, 234, 241, 424, 469 or 539 that is substituted by Ala, Ser, Tyr, Thr or Lys residue. (I) has antitumour, cytostatic, antipsoriatic, antiarthritic, vasotropic, gynaecological, antiinflammatory, anticoagulant, ophthalmological, antidiabetic and cerebroprotective activities, and can be used as: a tumour cell proliferation or metastasis inhibitor; a neovascularisation or angiogenesis inhibitor; and a heparin-like glycosaminoglycans (HLGAG) cleavage mediator. (I) is useful for preventing proliferation of tumours such as prostate tumour or melanoma, and for preventing tumour cell metastasis. (I) is also useful for treating arthritis, psoriasis, diabetic retinopathy, chronic inflammation, scleroderma, prolonged mensuration and bleeding by inhibiting neovascularisation or angiogenesis. It is also useful for treating disorders associated with coagulation and so can be used in treating cerebral ischaemia and thromboembolic stroke. N.B. The sequence data for this patent is not represented in the printed specification but is based on sequence information supplied by the European Patent Office.

=>

<-----User Break----->

=>

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=> s l1 or (heparin like glycosaminoglycan)

22 FILES SEARCHED...

44 FILES SEARCHED...

70 FILES SEARCHED...

L6 1233 L1 OR (HEPARIN LIKE GLYCOSAMINOGLYCAN)

=> s l6 and (targeting molecule) or (target)

23 FILES SEARCHED...

45 FILES SEARCHED...

64 FILES SEARCHED...

91 FILES SEARCHED...

L7 4637596 L6 AND (TARGETING MOLECULE) OR (TARGET)

=> s l6 and (targeting molecule)

31 FILES SEARCHED...

60 FILES SEARCHED...

L8 6 L6 AND (TARGETING MOLECULE)

=> s l6 and target

36 FILES SEARCHED...

74 FILES SEARCHED...

75% OF LIMIT FOR L#S REACHED

L9 73 L6 AND TARGET

=> s l6 and targeting

46 FILES SEARCHED...

85 FILES SEARCHED...

L10 44 L6 AND TARGETING

=> s l8 or l9 or l10

35 FILES SEARCHED...

89 FILES SEARCHED...

95% OF LIMIT FOR L#S REACHED

L11 98 L8 OR L9 OR L10

=> duplicate

ENTER REMOVE, IDENTIFY, ONLY, OR (?):remove

ENTER L# LIST OR (END):l11

DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, BIOCOMMERCE, DGENE, DRUGLAUNCH, DRUGMONOG2, DRUGUPDATES, FEDRIP, FOREGE, GENBANK, KOSMET, MEDICONE, PHAR, PHARMAML, SYNTHLINE, CHEMLIST, HSDB, MSDS-CCOHS, MSDS-OHS, RTECS, CONF, EVENTLINE, IMSDRUGCONF, DIOGENES, INVESTEXT, USAN, FORIS, FORKAT, UFORDAT, AQUIRE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, BIOTECHNO, CANCERLIT, CAPLUS, DDFU, EMBASE, ESBIODBASE, FEDRIP, GENBANK, IFIPAT, LIFESCI, MEDLINE, PASCAL, SCISEARCH, USPATFULL, USPAT2, WPINDEX, MSDS-OHS, NLDB'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L11

L12 64 DUPLICATE REMOVE L11 (34 DUPLICATES REMOVED)

=> d l12 1-64 bib ab

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REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):filedefault

L12 ANSWER 1 OF 64 COPYRIGHT 2002 Gale Group

AN 2002:44543 NLDB

TI Researchers Tailor Cancer Cells' Sugar Jackets To Inhibit Tumor Growth.

SO Cancer Weekly, (12 Feb 2002) pp. 11.

ISSN: 1532-4567.

PB NewsRX

DT Newsletter

LA English

WC 562

L12 ANSWER 2 OF 64 IFIPAT COPYRIGHT 2002 IFI DUPLICATE 1

AN 10179096 IFIPAT;IFIUDB;IFICDB

TI **HEPARINASE III** AND USES THEREOF

IN El-Shabrawi Yosuf (AT); Holley Kristine; Liu Dongfang; Pojasek Kevin; Sasisekharan Ram; Shriver Zachary; Venkataraman Ganesh

PA Unassigned Or Assigned To Individual (68000)

PI US 2002122793 A1 20020905

AI US 2001-802285 20010308

PRAI US 2000-187846P 20000308 (Provisional)

FI US 2002122793 20020905

DT Utility; Patent Application - First Publication

FS CHEMICAL

APPLICATION

CLMN 60

GI 16 Figure(s).

FIG. 1 is a graph depicting the effect of DEPC inactivation of **heparinase III** on rate constant.

FIG. 2 is a graph depicting the pH dependence of the second order rate constant of inactivation upon incubation of **heparinase III** with varying concentrations of DEPC.

FIG. 3 is a graph depicting the quantification of DEPC-modified histidine residues in **heparinase III** over a period of time.

FIG. 4 is a graph depicting the substrate protection of **heparinase III** inactivation by DEPC III.

FIG. 5 is a reverse phase HPLC profile of a lys-C digest of **heparinase III** which was not exposed to DEPC (top panel) and a peptide profile of **heparinase III** labeled with DEPC (bottom panel).

FIG. 6 is a series of graphs depicting SAX analysis of exhaustive

heparinase III digests of heparan sulfate. Heparan sulfate was digested with either **heparinase III** from *F. heparinum* (panel A), recombinant **heparinase III** (panel B), H295A mutant enzyme (panel C), H510A mutant enzyme (panel D), or the H105A mutant enzyme (panel E).

FIG. 7 depicts a circular dichroism analysis of recombinant **heparinase III** and the H295A mutant enzyme, and the H510A mutant enzyme.

FIG. 8 is a graph depicting tumor volume in mice, as well as mice treated with heparinase I.

FIG. 9 is a bar graph depicting number of lung nodules that developed 13 days after tail vein injection of B16 BL6 cells. The cells were either treated with PBS, heparinase I, or **heparinase III**.

FIG. 10, panel A, depicts the tumor volume of mice that were treated with GAG fragments generated from treatment of B16 BL6 cells with either heparinase I, **heparinase III**, or PBS or fragments generated from heparinase I treatment of LLC cells. Tumor volume was measured over time between 7 and 15 days postinjection of the tumor cells.

FIG. 10, panel B is a bar graph which quantitates the number of lung nodules of the mice described in panel A.

FIG. 11 is a bar graph depicting the effect on B16 cellular migration and invasion of transfection with antisense 20ST in pcDNA3.1.

FIG. 12 shows bar graphs depicting the ability of the transfected cells of FIG. 12 to develop into primary tumors as assessed by mean tumor volume (12a) and tumor weight (12b).

FIG. 13 depicts the results of compositional analysis of HLGAG saccharide fragments released from B16BL6 cells.

FIG. 14 is a bar graph depicting FGF2 signaling modulated by HLGAG fragments

FIG. 15 is a table (15a) and a schematic depicting the modulation of FGF2 activity in vivo by B16BL6 fragments (15b).

L12 ANSWER 3 OF 64 USPATFULL DUPLICATE 2
AN 2002:250778 USPATFULL
TI COMPOSITIONS AND METHODS FOR ALTERING CELL MIGRATION
IN MILLIS, ALBERT J. T., SCHENECTADY, NY, UNITED STATES
PI US 2002136716 A1 20020926
US 6464975 B2 20021015
AI US 1999-459749 A1 19991210 (9)
PRAI US 1998-111856P 19981211 (60)
DT Utility
FS APPLICATION
LN.CNT 964
INCL INCLM: 424/130.100
INCLS: 424/155.100; 530/387.100; 530/388.850; 435/007.230
NCL NCLM: 424/139.100
NCLS: 530/387.100; 530/389.200; 424/130.100
IC [7]
ICM: G01N033-574
ICS: A61K038-00; A61K039-395; C07K016-00; C12P021-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 4 OF 64 USPATFULL DUPLICATE 3
AN 2002:126346 USPATFULL
TI COMPOSITIONS INCLUDING GLYCOSAMINOGLYCANS DEGRADING ENZYMES AND USE OF SAME AGAINST SURFACE PROTECTED BACTERIA
IN YACOBY-ZEEVI, ORON, MEITAR, ISRAEL
PI US 2002064858 A1 20020530
US 6423312 B2 20020723
AI US 1998-140888 A1 19980827 (9)
RLI Continuation of Ser. No. US 1998-46475, filed on 25 Mar 1998, PATENTED

Continuation-in-part of Ser. No. US 1997-922170, filed on 2 Sep 1997,
PATENTED

DT Utility
FS APPLICATION
LN.CNT 1131
INCL INCLM: 435/232.000
NCL NCLM: 424/094.500
NCLS: 424/094.100; 424/094.610; 424/094.620; 435/183.000; 435/200.000;
435/209.000; 435/252.100

IC [7]
ICM: C12N009-88

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 5 OF 64 USPATFULL
AN 2002:301598 USPATFULL
TI Methods and products related to low molecular weight heparin
IN Sasisekharan, Ram, Cambridge, MA, UNITED STATES
Venkataraman, Ganesh, Waltham, MA, UNITED STATES
Shriver, Zachary, Cambridge, MA, UNITED STATES
Liu, Dongfang, Framingham, MA, UNITED STATES
Sundaram, Mallikarjun, Brighton, MA, UNITED STATES
Qi, Yiwei, Framingham, MA, UNITED STATES
PA Massachusetts Institute of Technology, Cambridge, MA (U.S. corporation)
PI US 2002169143 A1 20021114
AI US 2001-951138 A1 20010912 (9)
PRAI US 2000-231994P 20000912 (60)
DT Utility
FS APPLICATION
LN.CNT 3597
INCL INCLM: 514/054.000
INCLS: 436/094.000
NCL NCLM: 514/054.000
NCLS: 436/094.000
IC [7]
ICM: A61K031-715
ICS: G01N033-00

L12 ANSWER 6 OF 64 USPATFULL
AN 2002:272827 USPATFULL
TI Antibody PTI-HS7 for treatment of alzheimer's disease and other
amyloidoses and parkinson's disease
IN Castillo, Gerardo, Seattle, WA, UNITED STATES
Choi, Paula Y., Bothell, WA, UNITED STATES
Cummings, Joel A., Seattle, WA, UNITED STATES
Snow, Alan D., Lynnwood, WA, UNITED STATES
PI US 2002150948 A1 20021017
AI US 2001-53474 A1 20011102 (10)
PRAI US 2000-245951P 20001103 (60)
DT Utility
FS APPLICATION
LN.CNT 1260
INCL INCLM: 435/007.100
NCL NCLM: 435/007.100
IC [7]
ICM: G01N033-53

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 7 OF 64 USPATFULL
AN 2002:250783 USPATFULL
TI Hepatocyte growth factor receptor antagonists and uses thereof
IN Schwall, Ralph H., Pacifica, CA, UNITED STATES
Tabor, Kelly H., Hillsborough, CA, UNITED STATES

PI US 2002136721 A1 20020926
 AI US 2001-995693 A1 20011129 (9)
 RLI Continuation of Ser. No. US 2000-669971, filed on 26 Sep 2000, PENDING
 Continuation of Ser. No. US 1998-952235, filed on 17 Feb 1998, GRANTED,
 Pat. No. US 6207152 A 371 of International Ser. No. WO 1996-US8094,
 filed on 31 May 1996, UNKNOWN A 371 of International Ser. No. US
 1995-460368, filed on 2 Jun 1995, GRANTED, Pat. No. US 5686292
 DT Utility
 FS APPLICATION
 LN.CNT 2799
 INCL INCLM: 424/143.100
 INCLS: 530/388.220; 435/069.100; 435/326.000; 536/023.530
 NCL NCLM: 424/143.100
 NCLS: 530/388.220; 435/069.100; 435/326.000; 536/023.530
 IC [7]
 ICM: A61K039-395
 ICS: C07H021-04; C12P021-02; C12N005-06; C07K016-28
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 8 OF 64 USPATFULL
 AN 2002:250772 USPATFULL
 TI Methods and formulations for mediating adeno-associated virus (AAV)
 attachment and infection and methods for purifying AAV
 IN Samulski, Richard Jude, Chapel Hill, NC, UNITED STATES
 Summerford, Candace, Chapel Hill, NC, UNITED STATES
 PA The University, Chapel Hill, NC (U.S. corporation)
 PI US 2002136710 A1 20020926
 AI US 2002-102314 A1 20020320 (10)
 RLI Division of Ser. No. US 1999-228203, filed on 11 Jan 1999, PENDING
 PRAI US 1998-71210P 19980112 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 2796
 INCL INCLM: 424/093.210
 INCLS: 514/044.000; 514/056.000; 435/456.000
 NCL NCLM: 424/093.210
 NCLS: 514/044.000; 514/056.000; 435/456.000
 IC [7]
 ICM: A61K048-00
 ICS: A61K031-727; C12N015-861
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 9 OF 64 USPATFULL
 AN 2002:221971 USPATFULL
 TI ENTEROCOCCUS FAECALIS POLYNUCLEOTIDES AND POLYPEPTIDES
 IN KUNSCH, CHARLES A., ATLANTA, GA, UNITED STATES
 DILLON, PATRICK J., CARLSBAD, CA, UNITED STATES
 BARASH, STEVEN, ROCKVILLE, MD, UNITED STATES
 PI US 2002120116 A1 20020829
 AI US 1998-70927 A1 19980504 (9)
 DT Utility
 FS APPLICATION
 LN.CNT 13315
 INCL INCLM: 536/023.200
 INCLS: 435/069.100; 435/070.100; 435/071.100; 435/252.300; 435/320.100;
 530/350.000; 530/387.900; 800/013.000
 NCL NCLM: 536/023.200
 NCLS: 435/069.100; 435/070.100; 435/071.100; 435/252.300; 435/320.100;
 530/350.000; 530/387.900; 800/013.000
 IC [7]
 ICM: C07K016-00
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 10 OF 64 USPATFULL
 AN 2002:149158 USPATFULL
 TI USE OF HYALURONIC ACID AND FORMS TO PREVENT ARTERIAL RESTENOSIS
 IN FALK, RUDOLF E., TORONTO, CANADA
 ASCULAI, SAMUEL S., TORONTO, CANADA
 TURLEY, EVA A., MANITOBA, CANADA
 PI US 2002077314 A1 20020620
 AI US 1997-996470 A1 19971222 (8)
 RLI Continuation of Ser. No. US 1995-448503, filed on 26 Jul 1995, PATENTED
 Continuation-in-part of Ser. No. US 1991-675908, filed on 3 Jul 1991,
 PATENTED Continuation-in-part of Ser. No. US 1992-838674, filed on 21
 Feb 1992, ABANDONED Continuation-in-part of Ser. No. US 1992-838675,
 filed on 21 Feb 1992, PATENTED Continuation-in-part of Ser. No. US
 1993-125398, filed on 23 Sep 1993, PATENTED
 DT Utility
 FS APPLICATION
 LN.CNT 2015
 INCL INCLM: 514/054.000
 NCL NCLM: 514/054.000
 IC [7]
 ICM: A61K031-715
 ICS: A01N043-04
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 11 OF 64 USPATFULL
 AN 2002:126696 USPATFULL
 TI METHODS AND COMPOSITIONS FOR NONVIRAL GENE DELIVERY
 IN DEBS, ROBERT J., MILL VALLEY, CA, UNITED STATES
 PI US 2002065213 A1 20020530
 AI US 1999-232175 A1 19990115 (9)
 PRAI US 1998-71598P 19980116 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 2940
 INCL INCLM: 514/002.000
 INCLS: 514/008.000; 514/012.000; 514/044.000; 530/383.000; 435/069.100;
 435/455.000; 435/352.000; 435/366.000
 NCL NCLM: 514/002.000
 NCLS: 514/008.000; 514/012.000; 514/044.000; 530/383.000; 435/069.100;
 435/455.000; 435/352.000; 435/366.000
 IC [7]
 ICM: A61K048-00
 ICS: A61K038-17; C12P021-02; C12N005-06; C12N005-08; C12N015-87
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 12 OF 64 USPATFULL
 AN 2002:105976 USPATFULL
 TI Proteins involved in cytoadhesion of plasmodium falciparum
 ring-stage-infected erythrocytes, antibodies which bind to the proteins,
 and methods for detecting infection, stage of infection and vaccines for
 protecting against infection
 IN Gysin, Juerg, Saint Zacharie, FRANCE
 Pouvelle, Bruno, Saint Maximin, FRANCE
 Scherf, Artur, Paris, FRANCE
 Buffet, Pierre, Paris, FRANCE
 PA INSTITUT PASTEUR, Paris Cedex, FRANCE (non-U.S. corporation)
 PI US 2002055183 A1 20020509
 AI US 2001-867536 A1 20010531 (9)
 PRAI US 2000-207952P 20000531 (60)
 DT Utility
 FS APPLICATION

LN.CNT 827
INCL INCLM: 436/512.000
NCL NCLM: 436/512.000
IC [7]
ICM: G01N033-563
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 13 OF 64 USPATFULL
AN 2002:84894 USPATFULL
TI Inhibition of intimal hyperplasia using antibodies to PDGF receptors
IN Hart, Charles E., Brier, WA, UNITED STATES
Kenagy, Richard D., Seattle, WA, UNITED STATES
Clowes, Alexander W., Seattle, WA, UNITED STATES
PI US 2002044933 A1 20020418
AI US 2001-950955 A1 20010912 (9)
RLI Continuation of Ser. No. US 1999-265116, filed on 9 Mar 1999, PENDING
Continuation of Ser. No. US 1995-482533, filed on 7 Jun 1995, GRANTED,
Pat. No. US 5976534 Continuation-in-part of Ser. No. US 1994-366860,
filed on 30 Dec 1994, GRANTED, Pat. No. US 5620687 Continuation-in-part
of Ser. No. US 1994-304623, filed on 12 Sep 1994, ABANDONED Continuation
of Ser. No. US 1993-23504, filed on 25 Feb 1993, ABANDONED
DT Utility
FS APPLICATION
LN.CNT 2979
INCL INCLM: 424/143.100
NCL NCLM: 424/143.100
IC [7]
ICM: A61K039-395
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 14 OF 64 USPATFULL
AN 2002:27460 USPATFULL
TI HEPARIN-LIKE COMPOUNDS, THEIR PREPARATION AND USE TO PREVENT ARTERIAL
THROMBOSIS ASSOCIATED WITH VASCULAR INJURY AND INTERVENTIONS
IN LASSILA, RIITTA, ESPOO, FINLAND
KOVANEN, PETRI, ESPOO, FINLAND
LINDSTEDT, KEN, HELSINKI, FINLAND
PI US 2002016308 A1 20020207
AI US 1999-230097 A1 19990120 (9)
WO 1998-FI925 19981125
PRAI FI 1997-4321 19971125
DT Utility
FS APPLICATION
LN.CNT 1964
INCL INCLM: 514/056.000
INCLS: 536/021.000; 536/124.000
NCL NCLM: 514/056.000
NCLS: 536/021.000; 536/124.000
IC [7]
ICM: A61K031-24
ICS: A61K031-715; C07H001-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 15 OF 64 USPATFULL
AN 2002:304070 USPATFULL
TI Methods and compositions for detecting and treating kidney diseases
associated with adhesion of crystals to kidney cells
IN Toback, F. Gary, Chicago, IL, United States
Lieske, John C., Rochester, MN, United States
PA ARCH Development Corp., Chicago, IL, United States (U.S. corporation)
PI US 6482934 B1 20021119
AI US 2000-537226 20000328 (9)

RLI Continuation-in-part of Ser. No. US 1997-837226, filed on 10 Apr 1997,
now patented, Pat. No. US 6043216 Continuation-in-part of Ser. No. US
1995-389005, filed on 15 Feb 1995, now patented, Pat. No. US 5618917
DT Utility
FS GRANTED
LN.CNT 2519
INCL INCLM: 536/023.100
INCLS: 536/023.100; 530/300.000; 530/350.000; 435/006.000; 435/069.100;
435/007.100; 435/320.100; 514/002.000; 514/008.000; 514/021.000
NCL NCLM: 536/023.100
NCLS: 536/023.100; 530/300.000; 530/350.000; 435/006.000; 435/069.100;
435/007.100; 435/320.100; 514/002.000; 514/008.000; 514/021.000
IC [7]
ICM: C07H021-02
EXF 536/23.1; 435/6; 435/69.1; 435/7.1; 435/320.1; 530/350; 530/300; 514/8;
514/2; 514/21

L12 ANSWER 16 OF 64 USPATFULL
AN 2002:275738 USPATFULL
TI Hepatocyte growth factor receptor antagonists and uses thereof
IN Schwall, Ralph H., Pacifica, CA, United States
Tabor, Kelly H., Hillsborough, CA, United States
PA Genentech, Inc., South San Francisco, CA, United States (U.S.
corporation)
PI US 6468529 B1 20021022
AI US 2000-669971 20000926 (9)
RLI Continuation of Ser. No. US 952235, now patented, Pat. No. US 6207152
Continuation-in-part of Ser. No. US 1995-460368, filed on 2 Jun 1995,
now patented, Pat. No. US 5686292
DT Utility
FS GRANTED
LN.CNT 2994
INCL INCLM: 424/130.100
INCLS: 424/130.100; 424/133.100; 424/134.100; 424/135.100; 424/138.100;
424/141.100
NCL NCLM: 424/130.100
NCLS: 424/130.100; 424/133.100; 424/134.100; 424/135.100; 424/138.100;
424/141.100
IC [7]
ICM: A61K039-395
EXF 424/133.1; 424/134.1; 424/135.1; 424/138.1; 424/141.1; 536/23.53
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 17 OF 64 USPATFULL
AN 2002:217251 USPATFULL
TI Method for treating occlusive peripheral vascular disease and coronary
disease
IN Barron, Hal V., San Francisco, CA, United States
Botvinick, Elias, San Rafael, CA, United States
PA The Regents of the University of California, Oakland, CA, United States
(U.S. corporation)
PI US 6440947 B1 20020827
AI US 1998-167816 19981007 (9)
RLI Continuation-in-part of Ser. No. US 1997-946196, filed on 7 Oct 1997
DT Utility
FS GRANTED
LN.CNT 1289
INCL INCLM: 514/046.000
INCLS: 514/046.000; 514/056.000; 514/059.000; 514/062.000
NCL NCLM: 514/046.000
NCLS: 514/056.000; 514/059.000; 514/062.000
IC [7]

ICM: A61K031-70
ICS: A01N043-04
EXF 514/46; 514/56; 514/59; 514/62
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 18 OF 64 USPATFULL
AN 2002:152446 USPATFULL
TI Methods and formulations for mediating adeno-associated virus (AAV) attachment and infection and methods for purifying AAV
IN Samulski, Richard Jude, Chapel Hill, NC, United States
Summerford, Candace, Chapel Hill, NC, United States
PA The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)
PI US 6410300 B1 20020625
AI US 1999-228203 19990111 (9)
PRAI US 1998-71210P 19980112 (60)
DT Utility
FS GRANTED
LN.CNT 2953
INCL INCLM: 435/239.000
INCLS: 435/235.100; 435/320.100; 435/005.000; 424/093.200
NCL NCLM: 435/239.000
NCLS: 424/093.200; 435/005.000; 435/235.100; 435/320.100
IC [7]
ICM: C12N007-00
ICS: C12N007-02
EXF 424/93.21; 424/93.2; 435/320.1; 435/5; 435/239; 435/325; 435/235.1; 514/44
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 19 OF 64 USPATFULL
AN 2002:129536 USPATFULL
TI Chemokine--glycosaminoglycan complexes and their use in treating or preventing receptor mediated diseases
IN Devico, Anthony L., Alexandria, VA, United States
Lewis, George K., Baltimore, MD, United States
Burns, Jennifer M., Baltimore, MD, United States
Gallo, Robert, Bethesda, MD, United States
PA University of Maryland Biotechnology Institute, Baltimore, MD, United States (U.S. corporation)
PI US 6399078 B1 20020604
AI US 1999-323719 19990601 (9)
PRAI US 1998-87436P 19980601 (60)
DT Utility
FS GRANTED
LN.CNT 2604
INCL INCLM: 424/278.100
INCLS: 424/185.100; 424/279.100; 514/002.000; 514/056.000; 514/059.000; 514/885.000
NCL NCLM: 424/278.100
NCLS: 424/185.100; 424/279.100; 514/002.000; 514/056.000; 514/059.000; 514/885.000
IC [7]
ICM: A61K047-00
ICS: A61K039-00; A61K045-00; A61K038-00; A61K031-727
EXF 514/2; 514/56; 514/59; 514/885; 424/278.1; 424/185.1; 424/279.1
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 20 OF 64 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 2002:686324 SCISEARCH
GA The Genuine Article (R) Number: 582GX
TI Collagenase activity of cathepsin K depends on complex formation with

chondroitin sulfate
AU Li Z Q; Hou W S; Escalante-Torres C R; Gelb B D; Bromme D (Reprint)
CS Mt Sinai Sch Med, Dept Human Genet, Box 1498, 5th Ave 100 St, New York, NY
10029 USA (Reprint); Mt Sinai Sch Med, Dept Human Genet, New York, NY
10029 USA; Mt Sinai Sch Med, Dept Physiol & Biophys, New York, NY 10029
USA; Mt Sinai Sch Med, Dept Pediat, New York, NY 10029 USA
CYA USA
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (9 AUG 2002) Vol. 277, No. 32, pp.
28669-28676.
Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE
PIKE, BETHESDA, MD 20814-3996 USA.
ISSN: 0021-9258.
DT Article; Journal
LA English
REC Reference Count: 34
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L12 ANSWER 21 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
4
AN 2002:403192 BIOSIS
DN PREV200200403192
TI Low-molecular-weight heparins inhibit CCL21-induced T cell adhesion and
migration.
AU Christopherson, Kent W., II; Campbell, James J.; Travers, Jeffrey B.;
Hromas, Robert A. (1)
CS (1) 1044 W. Walnut St., Indianapolis, IN, 46202: rhromas@iupui.edu USA
SO Journal of Pharmacology and Experimental Therapeutics, (July, 2002) Vol.
302, No. 1, pp. 290-295. <http://jpet.aspetjournals.org>. print.
ISSN: 0022-3565.
DT Article
LA English

L12 ANSWER 22 OF 64 IFIPAT COPYRIGHT 2002 IFI DUPLICATE 5
AN 10006631 IFIPAT;IFIUDB;IFICDB
TI USE OF HEPARINASE TO DECREASE INFLAMMATORY RESPONSES; DECREASING
LOCALIZED INFLAMMATORY RESPONSES IN A TISSUE OF A PATIENT BY
ADMINISTERING TO SAID PATIENT HEPARINASE ENZYME IN AN EFFECTIVE AMOUNT
SUFFICIENT TO DECREASE SAID LOCALIZED INFLAMMATORY RESPONSE
IN BENNETT D CLARK (CA); CAUCHON ELIZABETH (CA); DANAGHER PAMELA (CA); FINK
DOMINIQUE (CA); GROUX BRIGETTE (CA); HSIA ARIANE (CA); ZIMMERMANN JOSEPH
(CA)
PA Unassigned Or Assigned To Individual (68000)
PI US 2001006635 A1 20010705
AI US 1996-722659 19960927
FI US 2001006635 20010705
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 17
GI 19 Figure(s).

FIG. 1 is a graph of the counts of ³⁵S-heparin/heparan sulfate released from the surface of endothelial cells by 1.0 IU/ml of **heparinase III**, which were separated according to size on a gel filtration column. The diamonds indicate counts released by a 5 minute digest, the squares indicate counts released by a 30 minute digest, and the triangles indicate counts released by a 60 minute digest. Background counts from fractionation of mock digests have been subtracted from the fractions derived from the **heparinase III** digests.

FIG. 2A and 2B are graphs of the percent of heparin/heparan sulfate present on the unactivated (2A) and IL-1b activated (2B) human endothelial cell line at the indicated times after treatment with 0.1 IU/ml heparinase I, II or III for 1 hour. ¹²⁵I-bFGF binding to cell

surface heparin was used to determine the amount of heparin/heparan sulfate present. Results for heparinase I, II or III treated cells are indicated by diamonds, squares or triangles, respectively. The vertical lines indicate the standard error of the means.

FIG. 3A and 3B are graphs of the percent of heparin/heparan sulfate present on the unactivated (3A) and IL-1b activated (3B) human endothelial cell line at the indicated times after treatment with 1.0 IU/ml heparinase I. 125I-bFGF binding to cell surface heparin was used to determine the amount of heparin/heparan sulfate present. Results for 1, 3 or 5 hour treated cells are indicated by diamonds, squares or triangles, respectively. The vertical lines indicate the standard error of the means.

FIG. 4A and 4B are graphs of the percent of heparin/heparan sulfate present on the unactivated (4A) and IL-1b activated (4B) human endothelial cell line at the indicated times after treatment with 1.0 IU/ml **heparinase III**. 125I-bFGF binding to cell surface heparin was used to determine the amount of heparin/heparan sulfate present. Results for 1, 3 or 5 hour treated cells are indicated by diamonds, squares or triangles, respectively. The vertical lines indicate the standard error of the means.

FIG. 5 contains graphs displaying the levels of IL-8 released from IL-1b activated human endothelial cell layers by treatment with 1.0 IU/ml of heparinases; I (5A), II (5B), I+III (bars containing diagonal lines; 5B), and III (5C). The bars represent the percent difference in the concentration of IL-8 found in; supernatants from activated endothelial layers treated with heparinases, versus untreated supernatants from activated endothelial layers (containing only secreted IL-8). Standard errors for these percentage differences are indicated by vertical lines. The lines overlaid on the bars indicate the concentration of IL-8 in the supernatants from the heparinase treated cell layers. The standard errors of these measurements are also indicated by vertical lines (not always visible).

FIG. 6 is a graph of the level of neutrophil adhesion to endothelial cells, which were unactivated, IL-1b activated, or treated with 0.1 IU/ml of heparinases I, II or III after IL-1b activation. The level of adhesion is expressed as the percent of added neutrophils, which are adhering.

FIGS. 7A, 7B and 7C are graphs of the percent inhibition of neutrophil extravasation through IL-1b activated endothelial cell layers, which were treated with heparinases I, II or III, respectively. The bars containing diagonal lines represent results of one hour treatments with 1.0 IU/ml of heparinase. The white bars represent results of one hour treatments with 0.1 IU/ml of heparinase. The black bars represent results of 15 minute treatments with 0.1 IU/ml of heparinase I or III, and the bar containing vertical lines represents results of 15 minute treatments with 1.0 IU/ml of heparinase II. The standard deviations for the percent inhibitions are indicated by vertical lines. The small asterisks indicate results of one hour treatments that were significantly different from the results of the 15 minute treatment with the same heparinase (P less-than 0.05). The large asterisks indicate the results of one hour treatments with 1.0 IU/ml of heparinase that were significantly different from the results of one hour treatments with 0.1 IU/ml of the same heparinase. The numbers in parentheses under the bars indicate the number of experiments included in each data set.

FIG. 8 is a graph showing the activity of human heparinase (bthromboglobulin) on ECM at pH 5.8 and 7. The solid bars represent the percent difference in 35SO4 released from ECM treated with 1 ug of human heparinase versus that released from untreated ECM. The bars containing diagonal lines represent the percent difference in 35SO4 released from ECM treated with 5 ug of human heparinase versus that released from untreated ECM. The standard deviation of the means are indicated by vertical lines.

FIG. 9 is a graph which displays the change in the level of neutrophil

extravasation upon activation of HUVEC layers with IL-1b, and after treatment of activated HUVEC layers with human heparinase (hhep). The standard deviation of the means are indicated by vertical lines.

FIG. 10 is a graph of rat plasma **heparinase III** concentrations over a five hour infusion period. Time points in the protocol are indicated by the arrows, with descriptions above the arrows. The vertical lines indicate the standard error of the means.

FIG. 11 is a graph of the level of leukocyte rolling in the rat microvasculature after 3 hours of ischemia, during reperfusion. The circles indicate the levels in naive rats, the squares indicate the levels in sham treated rats which underwent ischemia, and the triangles indicate the levels in heparinase treated rats which underwent ischemia. The vertical lines indicate the standard error of the means.

FIG. 12 is a graph of the level of leukocyte adhesion in the rat microvasculature after 3 hours of ischemia, during reperfusion. The circles indicate the levels in naive rats, the squares indicate the levels in sham treated rats which underwent ischemia, and the triangles indicate the levels in heparinase treated rats which underwent ischemia. The vertical lines indicate the standard error of the means.

FIG. 13 is a graph of the level of leukocyte extravasation in the rat microvasculature after 3 hours of ischemia, during reperfusion. The circles indicate the levels in heparinase treated rats which underwent ischemia. The vertical lines indicate the standard error of the means.

FIG. 14 is a graph of the level of leukocyte extravasation in the rat microvasculature after 2 hours of ischemia, during reperfusion. The open bars are the percent difference in the levels in sham treated rats versus the levels in naive rats. The bars containing diagonal lines are the percent difference in the levels in heparinase treated rats versus the levels in naive rats. The vertical lines indicate the standard error of the means.

FIG. 15 is a graph of the level of perfusion in rat postcapillary venules after 3 hours of ischemia, during reperfusion. The circles indicate the levels in naive rats, the squares indicate the levels in sham treated rats which underwent ischemia, and the triangles indicate the levels in heparinase treated rats which underwent ischemia. The vertical lines indicate the standard error of the means.

FIG. 16 is a graph of the heart rate-blood pressure product for rabbits during ischemia and reperfusion with or without heparinase treatment. The open circles and squares are data for saline pretreated and reperfusion treated rats, respectively. The open pyramids and solid circles are data for heparinase pretreated and reperfusion treated rabbits, respectively (25 ug/ ml **target** plasma levels for **heparinase III**). The solid squares, pyramids and diamonds are data for heparinase reperfusion treated rabbits with 5, 1.25 and 0.25 ug/ml **target** plasma levels of **heparinase III**, respectively. BASE indicates baseline levels. 30I indicates the level at 30 minutes of ischemia. 30R, 60R, 120R and 180R indicates the levels at 30, 60 120 and 180 minutes of reperfusion. The vertical lines indicate the standard deviation of the means.

FIG. 17 is a graph of the percent of the infarct size vs. risk zone after ischemia and reperfusion in rabbit hearts, which underwent different heparinase treatments. The solid circles indicate the average levels for each treatment group. The open shapes indicate the levels for individual rabbits. CPT and CRT indicate saline pretreated and reperfusion treated rabbits, respectively. DPT and DRT indicate heparinase pretreated and reperfusion treated rabbits, respectively. The numbers below DPT and DRT indicate the **target** level of **heparinase III** in the plasma (in ug/ml). The vertical lines indicate the standard deviation of the means.

FIG. 18 is a graph of the concentration of **heparinase III** which was infused into the heparinase treated rabbits (in IU/ml). DPT and DRT indicate heparinase pretreated and reperfusion

treated rabbits, respectively. The numbers below DPT and DRT indicate the **target** level of **heparinase III** in the plasma (in ug/ml). Con indicates control rabbits infused with saline. The vertical lines indicate the standard deviation of the means.

FIG. 19 is a graph of the concentrations of **heparinase III** measured in the rabbit plasma during pretreatment and reperfusion. The circles indicate the actual concentrations measured in heparinase pretreated rabbits targeted for 25 ug/ml plasma concentrations of **heparinase III**. The squares, pyramids, triangles and diamonds indicate the actual concentrations measured in heparinase reperfusion treated rabbits targeted for 25, 5, 1.25 and 0.25 ug/ml plasma concentrations of **heparinase III**, respectively. BASE indicates baseline concentrations. 30P and 60P indicate concentrations at 30 and 60 minutes of pretreatment. 15R, 30R, 60R, 120R and 180R indicate concentrations at 15, 30, 60 120 and 180 minutes of reperfusion, respectively. The vertical lines indicate the standard deviation of the means.

L12 ANSWER 23 OF 64 USPATFULL DUPLICATE 6
 AN 2001:165448 USPATFULL
 TI Pharmaceutical dosage form for oral administration of hydrophilic drugs, particularly low molecular weight heparin
 IN Chen, Feng-Jing, Salt Lake City, UT, United States
 Patel, Mahesh V., Salt Lake City, UT, United States
 Fikstad, David T., Salt Lake City, UT, United States
 PI US 2001024658 A1 20010927
 US 6458383 B2 20021001
 AI US 2000-751968 A1 20001229 (9)
 RLI Continuation-in-part of Ser. No. US 1999-375636, filed on 17 Aug 1999, PENDING
 PRAI WO 2000-US18807 20000710
 DT Utility
 FS APPLICATION
 LN.CNT 2150
 INCL INCLM: 424/452.000
 INCLS: 514/056.000; 514/171.000
 NCL NCLM: 424/451.000
 NCLS: 424/450.000; 424/451.000; 424/455.000; 424/456.000; 424/463.000; 424/489.000; 424/499.000; 424/502.000; 424/435.000; 424/464.000; 424/434.000; 514/937.000; 514/938.000; 514/939.000; 514/940.000; 514/941.000; 514/942.000; 514/943.000; 514/975.000; 514/056.000
 IC [7]
 ICM: A61K031-727
 ICS: A61K009-48
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 24 OF 64 USPATFULL
 AN 2001:163029 USPATFULL
 TI Human basic fibroblast growth factor analog
 IN Fiddes, John C., Palo Alto, CA, United States
 Abraham, Judith A., Sunnyvale, CA, United States
 Protter, Andrew, Palo Alto, CA, United States
 PA Scios Inc., Sunnyvale, CA, United States (U.S. corporation)
 PI US 6294359 B1 20010925
 AI US 1998-98628 19980616 (9)
 RLI Division of Ser. No. US 1990-459739, filed on 12 Feb 1990, now patented, Pat. No. US 5859208 Continuation-in-part of Ser. No. US 1987-70797, filed on 7 Jul 1987, now abandoned Continuation-in-part of Ser. No. US 1987-50706, filed on 15 May 1987, now abandoned Continuation-in-part of Ser. No. US 1986-869382, filed on 30 May 1986, now abandoned Continuation-in-part of Ser. No. US 1985-809163, filed on 16 Dec 1985, now patented, Pat. No. US 5439818 Continuation-in-part of Ser. No. US

1985-775521, filed on 12 Sep 1985, now abandoned
DT Utility
FS GRANTED
LN.CNT 2374
INCL INCLM: 435/069.400
INCLS: 435/243.000; 435/320.100; 435/325.000; 530/399.000
NCL NCLM: 435/069.400
NCLS: 435/243.000; 435/320.100; 435/325.000; 530/399.000
IC [7]
ICM: C12N015-18
ICS: C12N015-63; C12N001-21; C12N005-16; C07K014-50
EXF 435/69.4; 435/320.1; 435/325; 435/243; 530/399
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 25 OF 64 USPATFULL
AN 2001:43710 USPATFULL
TI Hepatocyte growth factor receptor antagonists and uses thereof
IN Schwall, Ralph H., Pacifica, CA, United States
Tabor, Kelly H., Hillsborough, CA, United States
PA Genentech, Inc., S. San Francisco, CA, United States (U.S. corporation)
PI US 6207152 B1 20010327
WO 9638557 19961205
AI US 1998-952235 19980217 (8)
WO 1996-US8094 19960531
19980217 PCT 371 date
19980217 PCT 102(e) date
RLI Continuation-in-part of Ser. No. US 1995-460368, filed on 2 Jun 1995,
now patented, Pat. No. US 5686292
DT Utility
FS Granted
LN.CNT 2855
INCL INCLM: 424/130.100
INCLS: 424/133.100; 424/138.100; 424/141.100; 424/143.100; 424/152.100;
424/155.100; 424/156.100; 424/174.100; 530/387.100; 530/387.300;
530/388.220; 530/388.880; 530/388.850; 530/389.100; 530/389.700;
435/007.100; 435/007.200; 435/007.210; 435/007.230
NCL NCLM: 424/130.100
NCLS: 424/133.100; 424/138.100; 424/141.100; 424/143.100; 424/152.100;
424/155.100; 424/156.100; 424/174.100; 435/007.100; 435/007.200;
435/007.210; 435/007.230; 530/387.100; 530/387.300; 530/388.220;
530/388.800; 530/388.850; 530/389.100; 530/389.700
IC [7]
ICM: C07K016-18
ICS: C07K016-28; A61K039-395
EXF 530/388.22; 530/387.1; 530/387.3; 530/388.88; 530/388.85; 530/389.1;
530/389.7; 424/130.1; 424/133.1; 424/138.1; 424/141.1; 424/143.1;
424/152.1; 424/155.1; 424/156.1; 424/174.1; 435/7.1; 435/7.2; 435/7.21;
435/7.23
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 26 OF 64 USPATFULL
AN 2001:33065 USPATFULL
TI Method and compositions for isolation, diagnosis and treatment of
polyanion-binding microorganisms
IN Marks, Rory M., Ann Arbor, MI, United States
Chen, Yaping, San Diego, CA, United States
Maguire, Terence, Waverly Dunedin, New Zealand
Linhardt, Robert J., Iowa City, IA, United States
PA The Regents of the University of Michigan, Ann Arbor, MI, United States
(U.S. corporation)
PI US 6197568 B1 20010306
AI US 1998-123770 19980728 (9)

PRAI US 1997-53828P 19970729 (60)
 DT Utility
 FS Granted
 LN.CNT 1449
 INCL INCLM: 435/239.000
 INCLS: 435/005.000; 435/007.100; 435/007.800; 435/029.000; 435/803.000;
 435/948.000; 424/185.000; 424/193.100; 424/196.110; 424/197.110;
 424/279.100; 514/023.000; 514/054.000; 514/055.000; 514/056.000;
 514/057.000; 514/058.000; 514/059.000; 514/060.000; 514/061.000;
 514/062.000
 NCL NCLM: 435/239.000
 NCLS: 424/185.100; 424/193.100; 424/196.110; 424/197.110; 424/279.100;
 435/005.000; 435/007.100; 435/007.800; 435/029.000; 435/803.000;
 435/948.000; 514/023.000; 514/054.000; 514/055.000; 514/056.000;
 514/057.000; 514/058.000; 514/059.000; 514/060.000; 514/061.000;
 514/062.000
 IC [7]
 ICM: C12Q001-70
 ICS: A61K039-29; A61K031-70; A01N043-04; C12N007-02
 EXF 435/7.1; 435/5; 435/7.8; 435/29; 435/239; 435/803; 435/948; 424/185.1;
 424/196.11; 424/197.11; 424/193.1; 424/279.1; 514/23; 514/54-62
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 27 OF 64 USPATFULL
 AN 2001:29322 USPATFULL
 TI Enhanced expression of human platelet-derived growth factor in Pichia
 pastoris
 IN Kaetzel, David M., Georgetown, KY, United States
 PA The University of Kentucky Research Foundation, Lexington, KY, United
 States (U.S. corporation)
 PI US 6194169 B1 20010227
 AI US 1998-90381 19980604 (9)
 DT Utility
 FS Granted
 LN.CNT 792
 INCL INCLM: 435/069.100
 INCLS: 435/069.400; 435/070.100; 435/071.100; 435/254.200; 435/254.230;
 435/255.100; 435/255.500; 435/252.300; 435/069.800; 435/471.000;
 435/320.100; 435/483.000; 435/325.000; 435/360.000; 435/366.000
 NCL NCLM: 435/069.100
 NCLS: 435/069.400; 435/069.800; 435/070.100; 435/071.100; 435/252.300;
 435/254.200; 435/254.230; 435/255.100; 435/255.500; 435/320.100;
 435/325.000; 435/360.000; 435/366.000; 435/471.000; 435/483.000
 IC [7]
 ICM: C12N015-09
 ICS: C12N015-63; C12N001-16; C12N005-10; C12P021-02
 EXF 435/69.1; 435/69.4; 435/70.1; 435/71.1; 435/254.2; 435/254.23;
 435/255.1; 435/255.5; 435/252.3; 435/69.8; 435/471; 435/320.1; 435/483;
 435/325; 435/360; 435/366
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 28 OF 64 WPINDEX (C) 2002 THOMSON DERWENT
 AN 2001-596840 [67] WPINDEX
 DNC C2001-176618
 TI Novel modified **heparinase III** polypeptides useful for
 treating cancer and inhibiting tumor cell growth and/or metastasis,
 sequencing **heparin-like glycosaminoglycans**,
 and removing active heparan sulfate from solution.
 DC B04 D16
 IN EL-SHABRAWI, Y; HOLLEY, K; LIU, D; POJASEK, K; SASISEKHARAN, R; SHRIVER,
 Z; VENKATARAMAN, G; DONGFANG, L
 PA (MASI) MASSACHUSETTS INST TECHNOLOGY; (ELSH-I) EL-SHABRAWI Y; (HOLL-I)

HOLLEY K; (LIUD-I) LIU D; (POJA-I) POJASEK K; (SASI-I) SASISEKHARAN R;
 (SHRI-I) SHRIVER Z; (VENK-I) VENKATARAMAN G

CYC 23

PI WO 2001066772 A2 20010913 (200167)* EN 94p C12N015-60
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
 W: AU CA JP

AU 2001043512 A 20010917 (200204) C12N015-60
 US 2002122793 A1 20020905 (200260) A61K038-47

ADT WO 2001066772 A2 WO 2001-US7464 20010308; AU 2001043512 A AU 2001-43512
 20010308; US 2002122793 A1 Provisional US 2000-187846P 20000308, US
 2001-802285 20010308

FDT AU 2001043512 A Based on WO 200166772

PRAI US 2000-187846P 20000308; US 2001-802285 20010308

IC ICM A61K038-47; C12N015-60
 ICS A61K031-715; A61K038-51; C08B037-00; C12N009-24; C12N009-88

L12 ANSWER 29 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 7

AN 2001:235119 BIOSIS

DN PREV200100235119

TI Human herpesvirus 8 interaction with **target** cells involves
 heparan sulfate.

AU Akula, Shaw M.; Wang, Fu-Zhang; Vieira, Jeffrey; Chandran, Bala (1)

CS (1) Department of Microbiology, Molecular Genetics and Immunology,
 University of Kansas Medical Center, 3901 Rainbow Blvd., Kansas City, KS,
 66160-7424: bchandra@kumc.edu USA

SO Virology, (April 10, 2001) Vol. 282, No. 2, pp. 245-255. print.
 ISSN: 0042-6822.

DT Article

LA English

SL English

L12 ANSWER 30 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:254610 BIOSIS

DN PREV200100254610

TI Proteoglycans regulate pulmonary fibroblast cellular response and
 extracellular matrix composition.

AU Buczek-Thomas, Jo Ann (1); Rich, Celeste B. (1); Stone, Phillip J. (1);
 Foster, Judith A. (1); Nugent, Matthew A. (1)

CS (1) Boston University School of Medicine, 80 East Concord Street, Boston,
 MA, 02118 USA

SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A244. print.
 Meeting Info.: Annual Meeting of the Federation of American Societies for
 Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA
 March 31-April 04, 2001
 ISSN: 0892-6638.

DT Conference

LA English

SL English

L12 ANSWER 31 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2002:163555 BIOSIS

DN PREV200200163555

TI Low molecular weight heparins inhibit CCL21-induced T-cell migration:
Targeting the endothelial expression of CCL21 in autoimmune
 diseases.

AU Christopherson, Kent W. (1); Campbell, James J.; Travers, Jeffrey B.;
 Hood, Antoinette F.; Ramsey, Heather C. (1); Hromas, Robert A. (1)

CS (1) Departments of Biochemistry/Molecular Biology, Hematology/Oncology,
 Walther Oncology Center, Indiana University Cancer Center, Indiana
 University School of Medicine, Indianapolis, IN USA

SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 233a.

<http://www.bloodjournal.org/>. print.

Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 1 Orlando, Florida, USA December 07-11, 2001

ISSN: 0006-4971.

DT Conference

LA English

L12 ANSWER 32 OF 64 USPATFULL

AN 2000:160585 USPATFULL

TI Use of glycosaminoglycans degrading enzymes for management of airway
associated diseases

IN Yacoby-Zeevi, Oron, Meitar, Israel

PA Insight Strategy & Marketing Ltd., Rohouot, Israel (non-U.S.
corporation)

PI US 6153187 20001128

AI US 1998-46475 19980325 (9)

RLI Continuation-in-part of Ser. No. US 1997-922170, filed on 2 Sep 1997,
now patented, Pat. No. US 5968822

DT Utility

FS Granted

LN.CNT 1041

INCL INCLM: 424/094.500

INCLS: 424/094.610; 424/094.620; 424/094.600; 435/232.000

NCL NCLM: 424/094.500

NCLS: 424/094.600; 424/094.610; 424/094.620; 435/232.000

IC [7]

ICM: A61K038-51

ICS: C12N009-88

EXF 424/94.5; 424/94.61; 424/94.62; 424/94.6; 435/232

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 33 OF 64 USPATFULL

AN 2000:101874 USPATFULL

TI Hepatocyte growth factor receptor agonists and uses thereof

IN Hillan, Kenneth J., San Francisco, CA, United States

Schwall, Ralph H., Pacifica, CA, United States

Tabor, Kelly H., Hillsborough, CA, United States

PA Genentech, Inc., South San Francisco, CA, United States (U.S.
corporation)

PI US 6099841 20000808

AI US 1997-884669 19970627 (8)

PRAI US 1996-21215P 19960703 (60)

DT Utility

FS Granted

LN.CNT 1908

INCL INCLM: 424/143.100

INCLS: 424/134.100; 424/135.100; 424/136.100; 424/138.100; 435/334.000;
530/387.700; 530/387.300; 530/388.220; 530/389.100; 530/389.200;
530/389.700; 530/350.000

NCL NCLM: 424/143.100

NCLS: 424/134.100; 424/135.100; 424/136.100; 424/138.100; 435/334.000;
530/350.000; 530/387.300; 530/387.700; 530/388.220; 530/389.100;
530/389.200; 530/389.700

IC [7]

ICM: C07K016-28

ICS: C12N015-06; A61K039-395

EXF 530/388.22; 530/389.1; 530/387.3; 530/350; 530/387.7; 530/389.7;

530/389.2; 435/334; 435/7.1; 514/2; 424/143.1; 424/134.1; 424/135.1;

424/136.1; 424/138.1

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 34 OF 64 USPATFULL.

AN 2000:98391 USPATFULL
 TI Growth-promoting proteins and peptides for kidney epithelial cells
 IN Toback, F. Gary, Chicago, IL, United States
 Walsh-Reitz, Margaret M., River Forest, IL, United States
 PA Arch Development Corporation, Chicago, IL, United States (U.S.
 corporation)
 PI US 6096706 20000801
 AI US 1997-974775 19971120 (8)
 DT Utility
 FS Granted
 LN.CNT 2210
 INCL INCLM: 514/002.000
 INCLS: 514/016.000; 514/015.000; 514/014.000; 514/013.000; 530/300.000;
 530/326.000; 530/327.000; 530/328.000; 530/329.000
 NCL NCLM: 514/002.000
 NCLS: 514/013.000; 514/014.000; 514/015.000; 514/016.000; 530/300.000;
 530/326.000; 530/327.000; 530/328.000; 530/329.000
 IC [7]
 ICM: C07K007-06
 ICS: C07K007-08; A61K038-08; A61K038-16
 EXF 514/2; 514/12-17; 530/300; 530/326-329
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 35 OF 64 USPATFULL
 AN 2000:37772 USPATFULL
 TI Methods and composition for detecting and treating kidney diseases
 associated with adhesion of crystals to kidney cells
 IN Toback, F. Gary, Chicago, IL, United States
 Lieske, John C., Evanston, IL, United States
 PA Arch Development Corporation, Chicago, IL, United States (U.S.
 corporation)
 PI US 6043216 20000328
 AI US 1997-837226 19970410 (8)
 RLI Continuation-in-part of Ser. No. US 1995-389005, filed on 15 Feb 1995,
 now patented, Pat. No. US 5618917, issued on 8 Apr 1997
 DT Utility
 FS Granted
 LN.CNT 2531
 INCL INCLM: 514/008.000
 INCLS: 530/395.000; 530/412.000; 530/425.000; 530/835.000
 NCL NCLM: 514/008.000
 NCLS: 530/395.000; 530/412.000; 530/425.000; 530/835.000
 IC [7]
 ICM: A61K038-17
 ICS: C07K001-14; C07K014-47
 EXF 436/501; 436/503; 436/87; 436/811; 514/8; 514/12; 514/21; 530/395;
 530/412; 530/425; 530/834; 530/835
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 36 OF 64 USPATFULL
 AN 2000:15642 USPATFULL
 TI Use of hyaluronic acid and forms to prevent arterial restenosis
 IN Falk, Rudolf Edgar, Toronto, Canada
 Asculai, Samuel Simon, Toronto, Canada
 Turley, Eva Anne, Winnipeg, Canada
 PA Hyal Pharmaceutical Corporation, Mississauga, Canada (non-U.S.
 corporation)
 PI US 6022866 20000208
 WO 9407505 19940414
 AI US 1995-403766 19950324 (8)
 WO 1993-CA388 19930922
 19950324 PCT 371 date

19950324 PCT 102(e) date

RLI Continuation-in-part of Ser. No. US 1994-285764, filed on 3 Aug 1994, now patented, Pat. No. US 5614506, issued on 25 Mar 1997 which is a continuation-in-part of Ser. No. US 1992-952095, filed on 28 Sep 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-675908, filed on 3 Jul 1991 And Ser. No. US 1992-838675, filed on 21 Feb 1992, now patented, Pat. No. US 5639738, issued on 17 Jun 1997

PRAI CA 1992-2079205 19920925

DT Utility

FS Granted

LN.CNT 1554

INCL INCLM: 514/054.000
INCLS: 514/023.000; 514/025.000; 514/028.000; 514/032.000; 514/042.000;
514/056.000; 514/060.000; 514/062.000; 536/055.000

NCL NCLM: 514/054.000
NCLS: 514/023.000; 514/025.000; 514/028.000; 514/032.000; 514/042.000;
514/056.000; 514/060.000; 514/062.000; 536/055.000

IC [6]
ICM: A61K031-70

EXF 424/180; 514/23; 514/25; 514/28; 514/32; 514/33; 514/42; 514/54; 514/56;
514/60; 514/62; 536/55

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 37 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
8

AN 2000:292364 BIOSIS

DN PREV200000292364

TI Attenuation of wound healing processes.

AU Zimmermann, Joseph (1); Vlodavsky, Israel; Bennett, Clark; Danagher, Pamel; Broughton, Richard

CS (1) Montreal Canada
ASSIGNEE: Ibex Technologies R and D, Inc., Montreal, Canada

PI US 5997863 December 07, 1999

SO Official Gazette of the United States Patent and Trademark Office Patents, (Dec. 7, 1999) Vol. 1229, No. 1, pp. No pagination. e-file.
ISSN: 0098-1133.

DT Patent

LA English

L12 ANSWER 38 OF 64 USPATFULL

AN 1999:151198 USPATFULL

TI Use of hyaluronic acid and forms to prevent arterial restenosis

IN Falk, Rudolf Edgar, Toronto, Canada
Asculi, Samuel Simon, Toronto, Canada
Turley, Eva Anne, Winnipeg, Canada

PA Hyal Pharmaceutical Corporation, Mississauga, Canada (non-U.S. corporation)

PI US 5990095 19991123

AI US 1995-448503 19950726 (8)
WO 1994-CA188 19940325
19950726 PCT 371 date
19950726 PCT 102(e) date

RLI Continuation-in-part of Ser. No. US 1991-675908, filed on 3 Jul 1991 And a continuation-in-part of Ser. No. US 1992-838674, filed on 21 Feb 1992, now abandoned Ser. No. Ser. No. US 1992-838675, filed on 21 Feb 1992, now patented, Pat. No. US 5639738 Ser. No. Ser. No. US 1992-952095, filed on 28 Sep 1992, now abandoned And Ser. No. US 1993-125398, filed on 23 Sep 1993, now patented, Pat. No. US 5834444

DT Utility

FS Granted

LN.CNT 1906

INCL INCLM: 514/054.000

NCL NCLM: 514/054.000
IC [6]
ICM: A61K031-70
EXF 536/55.1; 536/55.2; 514/54
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 39 OF 64 USPATFULL
AN 1999:136684 USPATFULL
TI Inhibition of intimal hyperplasia using antibodies to PDGF receptors and heparin
IN Hart, Charles E., Brier, WA, United States
Kenagy, Richard D., Seattle, WA, United States
Clowes, Alexander W., Seattle, WA, United States
PA ZymoGenetics, Inc., Seattle, WA, United States (U.S. corporation)
PI US 5976534 19991102
AI US 1995-482533 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-366860, filed on 30 Dec 1994, now patented, Pat. No. US 5620687 which is a continuation-in-part of Ser. No. US 1994-304623, filed on 12 Sep 1994, now abandoned which is a continuation of Ser. No. US 1993-23504, filed on 25 Feb 1993, now abandoned
DT Utility
FS Granted
LN.CNT 2864
INCL INCLM: 424/145.100
INCLS: 424/130.100; 424/133.100; 424/135.100; 424/141.100; 424/158.100; 514/056.000
NCL NCLM: 424/145.100
NCLS: 424/130.100; 424/133.100; 424/135.100; 424/141.100; 424/158.100; 514/056.000
IC [6]
ICM: A61K039-395
ICS: A61K031-725
EXF 424/130.1; 424/133.1; 424/135.1; 424/141.1; 424/143.1; 424/158.1; 514/56
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 40 OF 64 USPATFULL
AN 1999:132605 USPATFULL
TI Method and kit for detecting heparin induced thrombocytopenia
IN Aster, Richard H., Milwaukee, WI, United States
Visentin, Gian, Shorewood, WI, United States
PA The Blood Center Research Foundation, Inc., Milwaukee, WI, United States (U.S. corporation)
PI US 5972717 19991026
AI US 1997-974331 19971119 (8)
RLI Continuation of Ser. No. US 1995-438470, filed on 10 May 1995, now abandoned
DT Utility
FS Granted
LN.CNT 1265
INCL INCLM: 436/503.000
INCLS: 427/002.130; 435/007.100; 435/007.200; 435/007.900; 435/007.920; 435/007.940; 435/013.000; 435/028.000; 435/961.000; 435/970.000; 435/975.000; 436/501.000; 436/503.000; 436/513.000; 436/518.000; 436/529.000; 436/174.000; 436/175.000; 436/176.000; 436/530.000; 436/531.000; 436/532.000; 436/808.000
NCL NCLM: 436/503.000
NCLS: 427/002.130; 435/007.100; 435/007.200; 435/007.900; 435/007.920; 435/007.940; 435/013.000; 435/028.000; 435/961.000; 435/970.000; 435/975.000; 436/174.000; 436/175.000; 436/176.000; 436/501.000; 436/513.000; 436/518.000; 436/529.000; 436/530.000; 436/531.000; 436/532.000; 436/808.000

IC [6]
ICM: C12Q001-56
ICS: C12Q001-28; G01N033-53; G01N033-563
EXF 427/2.13; 435/7.1; 435/7.2; 435/7.94; 435/13; 435/28; 435/961; 435/970;
435/975; 435/7.9; 435/7.92; 436/501; 436/503; 436/513; 436/518; 436/529;
436/174; 436/175; 436/176; 436/530; 436/531; 436/532; 436/808; 436/811;
436/825; 514/54
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 41 OF 64 USPATFULL
AN 1999:75550 USPATFULL
TI Nucleic acid sequences and expression systems for heparinase II and
heparinase III derived from Flavobacterium heparinum
IN Su, Hongsheng, Longnenil, Canada
Blain, Francoise, Que, Canada
Bennett, Clark, Quebec, Canada
Gu, Kangfu, Quebec, Canada
Zimmermann, Joseph, Elm Grove, WI, United States
Musil, Roy, Carlsbad, CA, United States
PA IBEX Technologies Corp., Malvern, PA, United States (U.S. corporation)
PI US 5919693 19990706
AI US 1997-900951 19970725 (8)
RLI Division of Ser. No. US 1994-258639, filed on 10 Jun 1994, now patented,
Pat. No. US 5681733
DT Utility
FS Granted
LN.CNT 1605
INCL INCLM: 435/252.300
INCLS: 536/023.200; 536/024.100; 435/320.100; 435/252.330; 435/232.000
NCL NCLM: 435/252.300
NCLS: 435/232.000; 435/252.330; 435/320.100; 536/023.200; 536/024.100
IC [6]
ICM: C12N015-60
ICS: C12N001-21; C12N015-63; C12N009-88
EXF 536/23.2; 536/24.1; 435/320.1; 435/252.3; 435/252.33; 435/232
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 42 OF 64 USPATFULL
AN 1999:4861 USPATFULL
TI Human basic fibroblast growth factor analog
IN Fiddes, John C., 2320 Bryant St., Palo Alto, CA, United States 94301
Abraham, Judith A., 655 S. Fair Oaks Ave., Sunnyvale, CA, United States
94086
Protter, Andrew A., 185 N. California Ave., Palo Alto, CA, United States
94301
PI US 5859208 19990112
WO 8900198 19890112
AI US 1990-459739 19900212 (7)
WO 1988-US2264 19880706
19900212 PCT 371 date
19900212 PCT 102(e) date
DT Utility
FS Granted
LN.CNT 2048
INCL INCLM: 530/399.000
INCLS: 530/350.000
NCL NCLM: 530/399.000
NCLS: 530/350.000
IC [6]
ICM: C07K014-50
EXF 530/399; 530/350; 530/395
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 43 OF 64 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
 AN 1999275527 EMBASE
 TI Plasmodium falciparum: Molecular background to strain-specific rosette
 disruption by glycosaminoglycans and sulfated glycoconjugates.
 AU Barragan A.; Spillmann D.; Kremsner P.G.; Wahlgren M.; Carlson J.
 CS J. Carlson, Microbiol. and Tumor Biology Center, Karolinska Institutet,
 Swedish Inst. for Infect. Dis. Ctrl., S-171 77 Stockholm, Sweden.
 johan.carlson@smi.ki.se
 SO Experimental Parasitology, (1999) 91/2 (133-143).
 Refs: 41
 ISSN: 0014-4894 CODEN: EXPAAA
 CY United States
 DT Journal; Article
 FS 004 Microbiology
 037 Drug Literature Index
 LA English
 SL English

L12 ANSWER 44 OF 64 USPATFULL
 AN 1998:127903 USPATFULL
 TI Modulation of endothelial cell proliferation with IP-10
 IN Luster, Andrew, Wellesley, MA, United States
 Leder, Philip, Chestnut Hill, MA, United States
 PA President & Fellows of Harvard College, Cambridge, MA, United States
 (U.S. corporation)
 PI US 5824299 19981020
 AI US 1995-493638 19950622 (8)
 DT Utility
 FS Granted
 LN.CNT 1553
 INCL INCLM: 424/085.100
 INCLS: 514/002.000
 NCL NCLM: 424/085.100
 NCLS: 514/002.000
 IC [6]
 ICM: A61K038-19
 ICS: A61K038-16
 EXF 514/2; 424/85.1
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 45 OF 64 CAPLUS COPYRIGHT 2002 ACS
 AN 1997:303407 CAPLUS
 DN 126:272357
 TI Use of heparinases to decrease inflammatory responses
 IN Bennett, D. Clark; Cauchon, Elizabeth; Fink, Dominique; Grouix, Brigitte;
 Hsia, Ariane; Danagher, Pamela; Zimmerman, Joseph
 PA Ibex Technologies Inc., Can.; Bennett, D. Clark; Cauchon, Elizabeth; Fink,
 Dominique; Grouix, Brigitte; Hsia, Ariane; Danagher, Pamela; Zimmerman,
 Joseph
 SO PCT Int. Appl., 73 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | WO 9711684 | A1 | 19970403 | WO 1996-US15593 | 19960927 |
| | W: AU, BR, CA, CN, CZ, HU, IL, JP, KR, MX, NO, NZ, SG, US, VN, AM, | | | | |
| | AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | CA 2233343 | AA | 19970403 | CA 1996-2233343 | 19960927 |

| | | | | |
|---|----|----------|----------------|----------|
| AU 9673791 | A1 | 19970417 | AU 1996-73791 | 19960927 |
| AU 703394 | B2 | 19990325 | | |
| EP 852491 | A1 | 19980715 | EP 1996-936052 | 19960927 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 11512721 | T2 | 19991102 | JP 1996-513723 | 19960927 |
| US 2001006635 | A1 | 20010705 | US 1996-722659 | 19960927 |
| PRAI US 1995-4622P | P | 19950929 | | |
| WO 1996-US15593 | W | 19960927 | | |

L12 ANSWER 46 OF 64 USPATFULL
AN 97:99186 USPATFULL
TI Nucleic acid sequences and expression systems for heparinase II and **heparinase III** derived from Flavobacterium heparinum
IN Su, Hongsheng, Longueuil, Canada
Blain, Francoise, Mtl., Canada
Bennett, Clark, Pierrefonds, Canada
Gu, Kangfu, D.D.O., Canada
Zimmermann, Joseph, Elm Grove, WI, United States
Musil, Roy, Carlsbad, CA, United States
PA Ibex Technologies, Montreal, Canada (non-U.S. corporation)
PI US 5681733 19971028
AI US 1994-258639 19940610 (8)
DT Utility
FS Granted
LN.CNT 1467
INCL INCLM: 435/232.000
INCLS: 536/023.200
NCL NCLM: 435/232.000
NCLS: 536/023.200
IC [6]
ICM: C12N009-88
ICS: C12N015-60
EXF 435/232; 536/23.2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 47 OF 64 USPATFULL
AN 97:44760 USPATFULL
TI Antibodies specific for E-selectin and the uses thereof
IN Gimbrone, Jr., Michael A., Jamaica Plain, MA, United States
PA Brigham & Women's Hospital, Boston, MA, United States (U.S. corporation)
PI US 5632991 19970527
AI US 1994-365470 19941229 (8)
RLI Continuation-in-part of Ser. No. US 1993-102510, filed on 5 Aug 1993, now patented, Pat. No. US 5403713 which is a continuation of Ser. No. US 1992-850802, filed on 13 Mar 1992, now abandoned which is a division of Ser. No. US 1988-270860, filed on 14 Nov 1988, now abandoned
DT Utility
FS Granted
LN.CNT 2191
INCL INCLM: 424/178.100
INCLS: 424/143.100; 424/172.100; 530/395.000; 530/391.700
NCL NCLM: 424/178.100
NCLS: 424/143.100; 424/172.100; 530/391.700; 530/395.000
IC [6]
ICM: A61K039-395
ICS: A61K039-44; C07K016-28
EXF 424/152.1; 424/172.1; 424/178.1; 424/143.1; 530/388.22; 530/389.1; 530/391.1; 530/391.7
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 48 OF 64 USPATFULL

AN 97:31409 USPATFULL
TI Inhibition of intimal hyperplasia using antibodies to PDGF beta receptors
IN Hart, Charles E., Brier, WA, United States
Kenagy, Richard D., Seattle, WA, United States
Clowes, Alexander W., Seattle, WA, United States
PA ZymoGenetics, Inc., Seattle, WA, United States (U.S. corporation)
University of Washington, Seattle, WA, United States (U.S. corporation)
PI US 5620687 19970415
AI US 1994-366860 19941230 (8)
RLI Continuation-in-part of Ser. No. US 1994-304623, filed on 12 Sep 1994, now abandoned which is a continuation of Ser. No. US 1993-23504, filed on 25 Feb 1993, now abandoned
DT Utility
FS Granted
LN.CNT 2786
INCL INCLM: 424/143.100
INCLS: 424/130.100; 424/133.100; 424/135.100; 424/152.100
NCL NCLM: 424/143.100
NCLS: 424/130.100; 424/133.100; 424/135.100; 424/152.100
IC [6]
ICM: A61K039-395
EXF 424/130.1; 424/133.1; 424/135.1; 424/136.1; 424/141.1; 424/143.1; 424/145.1; 424/156.1; 424/152.1
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 49 OF 64 USPATFULL
AN 97:29572 USPATFULL
TI Methods and compositions for detecting and treating kidney diseases associated with adhesion of crystals to kidney cells
IN Toback, F. Gary, Chicago, IL, United States
Lieske, John C., Evanston, IL, United States
PA ARCH Development Corporation, Chicago, IL, United States (U.S. corporation)
PI US 5618917 19970408
AI US 1995-389005 19950215 (8)
DT Utility
FS Granted
LN.CNT 1623
INCL INCLM: 530/350.000
INCLS: 434/558.000
NCL NCLM: 530/350.000
NCLS: 424/558.000
IC [6]
ICM: C07K014-435
ICS: A01K038-17
EXF 530/350; 514/2; 424/558
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 50 OF 64 AGRICOLA DUPLICATE 9
AN 97:53785 AGRICOLA
DN IND20580794
TI Host cell heparan sulfate proteoglycans mediate attachment and entry of *Listeria monocytogenes*, and the listerial surface protein ActA is involved in heparan sulfate receptor recognition.
AU Alvarez-Dominguez, C.; Vazquez-Boland, J.A.; Carrasco-Marin, E.; Lopez-Mato, P.; Leyva-Cobian, F.
CS Washington University School of Medicine, St. Louis, Mo.
SO Infection and immunity, Jan 1997. Vol. 65, No. 1. p. 78-88
Publisher: Washington, D.C., American Society for Microbiology
ISSN: 0019-9567
NTE Includes references

CY District of Columbia; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 51 OF 64 CAPLUS COPYRIGHT 2002 ACS
AN 1996:237498 CAPLUS
DN 124:250963
TI Glycosaminoglycan-degrading enzymes for modulation of wound healing processes
IN Zimmermann, Joseph; Vlodavsky, Israel; Bennett, D. Clark; Danagher, Pamela; Broughton, Richard
PA Ibex Technologies R and D, Inc., USA
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 9601648 | A1 | 19960125 | WO 1995-US8608 | 19950707 |
| | W: AU, CA, JP, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 5997863 | A | 19991207 | US 1994-273109 | 19940708 |
| | CA 2194370 | AA | 19960125 | CA 1995-2194370 | 19950707 |
| | AU 9530949 | A1 | 19960209 | AU 1995-30949 | 19950707 |
| | AU 707007 | B2 | 19990701 | | |
| | EP 769961 | A1 | 19970502 | EP 1995-926645 | 19950707 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | JP 10506609 | T2 | 19980630 | JP 1995-504443 | 19950707 |
| PRAI | US 1994-273109 | | 19940708 | | |
| | WO 1995-US8608 | | 19950707 | | |

L12 ANSWER 52 OF 64 USPATFULL
AN 96:96761 USPATFULL
TI Method for inhibiting angiogenesis using heparinase
IN Sasisekharan, Ramnath, Arlington, MA, United States
Moses, Marsha A., Brookline, MA, United States
Nugent, Matthew A., Bedford, MA, United States
Cooney, Charles L., Brookline, MA, United States
Langer, Robert S., Newton, MA, United States
PA Massachusetts Institute of Technology, Cambridge, MA, United States
(U.S. corporation)
Children's Medical Center Corporation, Boston, MA, United States (U.S. corporation)
PI US 5567417 19961022
AI US 1995-431476 19950501 (8)
RLI Continuation of Ser. No. US 1993-153873, filed on 17 Nov 1993, now abandoned
DT Utility
FS Granted
LN.CNT 1147
INCL INCLM: 424/094.500
INCLS: 435/232.000
NCL NCLM: 424/094.500
NCLS: 435/232.000
IC [6]
ICM: A61K038-51
EXF 424/94.5; 435/232

L12 ANSWER 53 OF 64 USPATFULL
AN 96:55855 USPATFULL

TI Methods for purification of recombinantly produced proteins
 IN Darling, Thomas L. J., Lafayette Hill, PA, United States
 Akhnana, Lida Y., Audubon, PA, United States
 Mitschelen, Jonathan J., Perkiomenville, PA, United States
 Hrinda, Michael E., Gwynedd Valley, PA, United States
 PA Rhone-Poulenc Rorer Pharmaceuticals Inc., Collegeville, PA, United
 States (U.S. corporation)
 PI US 5530100 19960625
 AI US 1990-519709 19900507 (7)
 DT Utility
 FS Granted
 LN.CNT 1475
 INCL INCLM: 530/383.000
 INCLS: 435/069.600; 530/408.000; 530/410.000; 530/417.000; 530/422.000;
 530/423.000; 530/424.000; 530/427.000
 NCL NCLM: 530/383.000
 NCLS: 435/069.600; 530/408.000; 530/410.000; 530/417.000; 530/422.000;
 530/423.000; 530/424.000; 530/425.000; 530/427.000
 IC [6]
 ICM: C07K003-08
 ICS: C07K003-12; C07K003-20; C07K015-06
 EXF 530/383; 530/408; 530/410; 530/427; 530/415; 530/417; 530/422; 530/423;
 530/424; 530/425; 435/69.6
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 54 OF 64 USPATFULL
 AN 96:7785 USPATFULL
 TI Construction and use of synthetic constructs encoding syndecan
 IN Saunders, Scott, Boston, MA, United States
 Bernfield, Merton, Boston, MA, United States
 Kato, Masato, Boston, MA, United States
 PA The Board of Trustees of the Leland Stanford Junior University, Palo
 Alto, CA, United States (U.S. corporation)
 Children's Medical Center Corporation, Boston, MA, United States (U.S.
 corporation)
 PI US 5486599 19960123
 AI US 1993-78683 19930617 (8)
 RLI Continuation-in-part of Ser. No. US 1991-757654, filed on 6 Sep 1991,
 now abandoned And a continuation-in-part of Ser. No. US 1992-856869,
 filed on 24 Mar 1992, now abandoned which is a continuation-in-part of
 Ser. No. US 1991-746797, filed on 12 Aug 1991, now abandoned which is a
 continuation-in-part of Ser. No. US 1989-331585, filed on 29 Mar 1989,
 now abandoned
 DT Utility
 FS Granted
 LN.CNT 3939
 INCL INCLM: 530/395.000
 INCLS: 435/069.100; 435/069.700; 435/252.300; 435/320.100; 536/023.400;
 536/023.500; 935/010.000; 935/047.000; 935/050.000; 935/070.000
 NCL NCLM: 530/395.000
 NCLS: 435/069.100; 435/069.700; 435/252.300; 435/320.100; 536/023.400;
 536/023.500
 IC [6]
 ICM: C07K014-435
 ICS: C07K019-00; C12N015-12; C12N015-62
 EXF 536/23.4; 530/395; 530/350; 435/69.7; 435/69.1; 435/252.3; 435/320.1
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 55 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 10
 AN 1994:303016 BIOSIS
 DN PREV199497316016

TI Binding of urinary protein C inhibitor to cultured human epithelial kidney tumor cells (TCL-598): The role of glycosaminoglycans present on the luminal cell surface.
AU Priglinger, Ute; Geiger, Margarethe (1); Bielek, Edith; Vanyek, Erika; Binder, Bernd R.
CS (1) Lab. Clinical Experimental Physiol., Dep. Med. Physiol., Schwarzspanierstrasse 17, A1090 Vienna Austria
SO Journal of Biological Chemistry, (1994) Vol. 269, No. 20, pp. 14705-14710. ISSN: 0021-9258.
DT Article
LA English

L12 ANSWER 56 OF 64 USPATFULL

AN 93:69847 USPATFULL

TI Peptides that inhibit von Willebrand Factor binding to the platelet SPIB receptor

IN Zimmerman, Theodore S., La Jolla, CA, United States

Fujimura, Yoshihiro, Kashihara, Japan

Houghten, Richard A., Solana Beach, CA, United States

Ruggeri, Zaverio M., La Jolla, CA, United States

PA Scipps Clinic and Research Foundation, La Jolla, CA, United States (U.S. corporation)

PI US 5238919 19930824

AI US 1990-519606 19900507 (7)

RLI Continuation-in-part of Ser. No. US 1988-270488, filed on 4 Nov 1988, now abandoned which is a continuation-in-part of Ser. No. US 1986-869188, filed on 30 May 1986, now abandoned

DT Utility

FS Granted

LN.CNT 1475

INCL INCLM: 514/008.000

INCLS: 514/012.000; 514/013.000; 514/014.000; 514/822.000; 530/324.000; 530/325.000; 530/326.000; 530/383.000; 530/395.000

NCL NCLM: 514/008.000

NCLS: 514/012.000; 514/013.000; 514/014.000; 514/822.000; 530/324.000; 530/325.000; 530/326.000; 530/383.000; 530/395.000

IC [5]

ICM: A61K035-16

ICS: A61K037-02; C07K004-08; C07K015-14

EXF 530/33; 530/330; 530/329; 530/328; 530/327; 530/326; 530/325; 530/324; 530/350; 514/8; 514/12; 514/13; 514/14; 514/15; 514/16; 514/17; 514/18; 514/19

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 57 OF 64 CANCERLIT

AN 94697921 CANCERLIT

DN 94697921

TI Molecular mechanism for the regulation of fibroblast growth factor by the polyanions heparin and suramin (Meeting abstract).

AU Ranson M R; Stone A L; Chen R; Porter D; Myers C E

CS Dept. of Medical Oncology, Christie Hosp., Manchester, UK.

SO Br J Cancer, (1993) 67 (Suppl XX) 11.

ISSN: 0007-0920.

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Institute for Cell and Developmental Biology

EM 199403

ED Entered STN: 19941107

Last Updated on STN: 19970509

L12 ANSWER 58 OF 64 DDFU COPYRIGHT 2002 THOMSON DERWENT

AN 1993-23404 DDFU P

TI Molecular Mechanism for the Regulation of Fibroblast Growth Factor by the
Polyanions Heparin and Suramin.
AU Ranson M R; Stone A L; Chen R; Porter D; Myers C E
LO Manchester, United Kingdom; Bethesda, Maryland, United States
SO Br.J.Cancer (67, Suppl. 20, 11, 1993)
CODEN: BJCAAI ISSN: 0007-0920
AV Department of Medical Oncology, Christie Hospital, Manchester, England.
LA English
DT Journal
FA AB; LA; CT
FS Literature

L12 ANSWER 59 OF 64 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
11

AN 1989:121985 BIOSIS

DN BA87:56638

TI BINDING OF PROTEASE NEXIN-1 TO THE FIBROBLAST SURFACE ALTERS ITS
TARGET PROTEINASE SPECIFICITY.

AU WAGNER S L; LAU A L; CUNNINGHAM D D

CS DEP. MICROBIOL. AND MOL. GENETICS, COLL. MED., UNIV. CALIFORNIA, IRVINE,
CALIF. 92717.

SO J BIOL CHEM, (1989) 264 (1), 611-615.

CODEN: JBCHA3. ISSN: 0021-9258.

FS BA; OLD

LA English

L12 ANSWER 60 OF 64 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AN 74150058 EMBASE

DN 1974150058

TI Distribution of sulphate and iduronic acid residues in heparin and heparan
sulphate.

AU Hook M.; Lindahl U.; Iverius P.H.

CS Inst. Med. Chem., Univ. Uppsala, Sweden

SO Biochemical Journal, (1974) 137/1 (33-43).

CODEN: BIJOAK

DT Journal

FS 037 Drug Literature Index

029 Clinical Biochemistry

025 Hematology

LA English

L12 ANSWER 61 OF 64 FEDRIP COPYRIGHT 2002 NTIS

AN 2002:179021 FEDRIP

NR CRISP 5R01HL62602-03

TI NOVEL USE OF HMG-COA REDUCTASE INHIBITORS IN STROKE

SF Principal Investigator: MOKOWITZ, MICHAEL A; MASSACHUSETTS GENERAL
HOSPITAL, 149 13TH STREET, CHARLESTOWN, MA. 02129

CSP MASSACHUSETTS GENERAL HOSPITAL, BOSTON, MASSACHUSETTS

CSS Supported By: NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

FYR 2001

FU Noncompeting Continuation (Type 5)

FS National Institutes of Health

L12 ANSWER 62 OF 64 GENBANK.RTM. COPYRIGHT 2002

LOCUS (LOC): SCO939105 GenBank (R)

GenBank ACC. NO. (GBN): AL939105 AL109974 AL117385 AL117387 AL117669 AL121596
AL121600 AL121719 AL121849 AL121855 AL132662 AL132707
AL645882

GenBank VERSION (VER): AL939105.1 GI:24418991

CAS REGISTRY NO. (RN): 468711-59-3

SEQUENCE LENGTH (SQL): 291000

MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Bacteria
 DATE (DATE): 25 Oct 2002
 DEFINITION (DEF): Streptomyces coelicolor A3(2) complete genome; segment 2/29.

SOURCE: Streptomyces coelicolor A3(2).
 ORGANISM (ORGN): Streptomyces coelicolor A3(2)
 Bacteria; Actinobacteria; Actinobacteridae;
 Actinomycetales; Streptomycineae; Streptomycetaceae;
 Streptomyces

NUCLEIC ACID COUNT (NA): 39089 a 105537 c 106715 g 39659 t

COMMENT:

On or before Oct 29, 2002 this sequence version replaced
 gi:20520891, gi:20520894, gi:20520895, gi:20520772, gi:20520896,
 gi:20520897, gi:20520883, gi:20520899, gi:20520902.

REFERENCE:

1
 AUTHOR (AU): Bentley, S.D.; Chater, K.F.; Cerdeno-Tarraga, A.M.;
 Challis, G.L.; Thomson, N.R.; James, K.D.; Harris, D.E.;
 Quail, M.A.; Kieser, H.; Harper, D.; Bateman, A.; Brown, S.;
 Chandra, G.; Chen, C.W.; Collins, M.; Cronin, A.;
 Fraser, A.; Goble, A.; Hidalgo, J.; Hornsby, T.;
 Howarth, S.; Huang, C.H.; Kieser, T.; Larke, L.; Murphy, L.;
 Oliver, K.; O'Neil, S.; Rabbinowitsch, E.;
 Rajandream, M.A.; Rutherford, K.; Rutter, S.; Seeger, K.;
 Saunders, D.; Sharp, S.; Squares, R.; Squares, S.;
 Taylor, K.; Warren, T.; Wietzorrek, A.; Woodward, J.;
 Barrell, B.G.; Parkhill, J.; Hopwood, D.A.

TITLE (TI): Complete genome sequence of the model actinomycete
 Streptomyces coelicolor A3(2)

JOURNAL (SO): Nature, 417 (6885), 141-147 (2002)

OTHER SOURCE (OS): CA 136:396750

REFERENCE:

2 (bases 1 to 291000)
 AUTHOR (AU): Bentley, S.D.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (09-MAY-2002) Submitted on behalf of the
 Streptomyces sequencing team, Sanger Institute,
 Wellcome Trust Genome Campus, Hinxton, Cambridge CB10
 1SA E-mail: sdb@sanger.ac.uk

FEATURES (FEAT):

| Feature Key | Location | Qualifier |
|-------------|-----------|--|
| source | 1..291000 | /organism="Streptomyces coelicolor A3(2)" /strain="A3(2)" /db-xref="taxon:100226" |
| gene | 213..3092 | /gene="SC5G9.14" /note="SCO0305" |
| CDS | 213..3092 | /gene="SC5G9.14" /note="SC5G9.14, hypothetical protein, len: 959 aa; unknown function, similar to TR:O54182 (EMBL:AL021411) Streptomyces coelicolor hypothetical protein. (913 aa), fasta scores; opt: 698 z-score: 776.6 E(): 0, 27.0% identity in 972 aa overlap. The C-terminus shows very weak similarity to eukaryotic beta-transducins e.g. SW:GBB4-MOUSE (EMBL:S86124), gnb4, Mus musculus guanine |

289201 accgaggggtg tgtccgaagg ccccttgggt ggcgtgacc gtgacgtcgt ccacgccctt
 289261 ggcgaagacg ctgtgcagcg cctgcgcctc gccgaggtcg ccgagcgggtg tggcgggtggc
 289321 gtgggctgtg acgtgctgga tctgtctcgg caccagcccc gcgtcgcgca gtgcggcgctc
 289381 gacggccgcc gcgcagcccc gaccgcgggg cgccggctgg gccacgtggt ggctgtcgtt
 289441 ggtgatgccc gccccgggtga gccggccgtg gacgcggggc ccgcgggcg cggcgtgcgc
 289501 ggcgtctctg accacgagca tgccggcgcc cccccccatc acgaagccgt cccggtcggc
 289561 gtcgaagggc ctggaggccc ccttgggatc gtgctggcgc cgggagaggg cccgcagccg
 289621 cgcgaaccgc gccaggacca gcggatgcag cgcggcctcg gtgccgccc cgaccacgat
 289681 gtccgcgcgg cgtcccggg tcatgccgag ggccctggcg agggcctcgg caccggcggc
 289741 gcaggcactg acgggcgcgt gacccccggc cttcgcgcc accatgagc ccacttcggc
 289801 ggccgcgtgg ttgggcagca tgaccgggat ggtgcgcggg ctcaccgcc ccgcgccctg
 289861 cgtccgcagg cgggtggtcct gctccaggac gctggtgagg ccgccagcc ccaccccgac
 289921 gaccacggcc acccgcgacc cgtccccggc gacgcgggac gggtcgggga acccgcgctc
 289981 gcgaacggcc tcgcggggcg ccacgagggc gaactgcgcc gagcggctgc agtgcgccgc
 290041 cttggcggac gacaggaccg tcccggggtc gaccgcggcc ggggcccgcg ggtacacctg
 290101 tgccggcccg gccggtcgc cgaagtcgac gcgttcgac ccgcaccgc cgtccagcag
 290161 ggcccgccag gtggagggga cgtcgcgcc cagcgaggtg gtcagcccca gcccgtgac
 290221 gacggcggcc cgtccccgg gggccggggc ggccgcgtgt cgtggactca cgcggtgccg
 290281 ccggcggggg cggcgacggc ctcggcgagg tggcgggcga tctgccgcac cgtcgtgagc
 290341 cggtcgcct gctcctggg gacctcgatc tgccagcgg cctcgatcgc ggcgaccagt
 290401 tccagccggg ccagcgagtc gacgccagg tcgtcctgga gcgaggagtc ggggccgatc
 290461 tctccacagg tcaggctctc gaccgtggcg gcgagcaggt cagcgagtc gtcgagcagc
 290521 tgtcgttcgt cggcgggtga cggcatgtcc ggtacctcct cggtcgggtgc acggcgcgcc
 290581 cggagggcgt gggcgggagg acccgttccc cggcgcgccc ggtggtgtcc ggcgacctgc
 290641 cgggtgcacgc ggacaggctg tccggccgtg cggcacggta agcgcgggg gcggagggac
 290701 ggcgagcat cgggagcac ggacgggctc ctgcgagcac ccgtgtcccc cttcacctt
 290761 gaagcgcccc ggcgccgacc gaggggtggc ggctgcgggc gcgtaaggga ccggacgggg
 290821 cgaacgggg cgccgggcat cctcaacgga ctttggcggc tcttttaagg ctttctgaag
 290881 atgaccttcg aacgggcgtt tccacgcgg tcgcgtccta ggctctcgaa cccccccac
 290941 agtcccgggt ggcgcggtcg cgtccaccgg gtacgggggt tccgccagcc gaccgacaag

L12 ANSWER 63 OF 64 GENBANK.RTM. COPYRIGHT 2002

LOCUS (LOC): SCF62 GenBank (R)
 GenBank ACC. NO. (GBN): AL121855 AL645882
 GenBank VERSION (VER): AL121855.3 GI:20520899
 CAS REGISTRY NO. (RN): 244807-66-7
 SEQUENCE LENGTH (SQL): 34496
 MOLECULE TYPE (CI): DNA; linear
 DIVISION CODE (CI): Bacteria
 DATE (DATE): 12 May 2002
 DEFINITION (DEF): Streptomyces coelicolor cosmid F62.
 SOURCE: Streptomyces coelicolor A3(2).
 ORGANISM (ORGN): Streptomyces coelicolor A3(2)
 Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
 Actinomycetales; Streptomycineae; Streptomycetaceae;
 Streptomyces

NUCLEIC ACID COUNT (NA): 4747 a 12332 c 12742 g 4675 t

COMMENT:

On May 9, 2002 this sequence version replaced gi:6165435.

Notes:

Streptomyces coelicolor sequencing at The Sanger Centre is funded by the BBSRC and Beowulf Genomics

Details of S. coelicolor sequencing at the Sanger Centre are available on the World Wide Web.

(URL; http://www.sanger.ac.uk/Projects/S_coelicolor/) CDS are numbered using the following system eg SC7B7.01c. SC (S. coelicolor), 7B7 (cosmid name), .01 (first CDS), c (complementary strand).

The more significant matches with motifs in the PROSITE database are also included but some of these may be fortuitous. The length in codons is given for each CDS.

Usually the highest scoring match found by fasta -o is given for CDS which show significant similarity to other CDS in the database. The position of possible ribosome binding site sequences are given where these have been used to deduce the initiation codon. Gene prediction is based on positional base preference in codons using a specially developed Hidden Markov Model (Krogh et al., Nucleic Acids Research, 22(22):4768-4778(1994)) and the FramePlot program of Bibb et al., Gene 30:157-66(1984) as implemented at <http://www.nih.go.jp/jun/cgi-bin/frameplot.pl>. CAUTION: We may not have predicted the correct initiation codon. Where possible we choose an initiation codon (atg, gtg, ttg or (att)) which is preceded by an upstream ribosome binding site sequence (optimally 5-13bp before the initiation codon). If this cannot be identified we choose the most upstream initiation codon.

IMPORTANT: This sequence MAY NOT be the entire insert of the sequenced clone. It may be shorter because we only sequence overlapping sections once, or longer, because we arrange for a small overlap between neighbouring submissions. Cosmid F62 Lies on the AseI-F genomic restriction fragment.

REFERENCE: 1 (bases 1 to 34496)
 AUTHOR (AU): Redenbach,M.; Kieser,H.M.; Denapaite,D.; Eichner,A.; Cullum,J.; Kinashi,H.; Hopwood,D.A.
 TITLE (TI): A set of ordered cosmids and a detailed genetic and physical map for the 8 Mb Streptomyces coelicolor A3(2) chromosome
 JOURNAL (SO): Mol. Microbiol., 21 (1), 77-96 (1996)
 OTHER SOURCE (OS): CA 125:159753
 REFERENCE: 2 (bases 1 to 34496)
 AUTHOR (AU): Murphy,L.; Harris,D.
 JOURNAL (SO): Unpublished
 REFERENCE: 3 (bases 1 to 34496)
 AUTHOR (AU): Thomson,N.R.; Parkhill,J.; Barrell,B.G.; Rajandream,M.A.
 TITLE (TI): Direct Submission
 JOURNAL (SO): Submitted (29-OCT-1999) Streptomyces coelicolor sequencing project, Sanger Centre, Wellcome Trust Genome Campus, Hinxton, Cambridge CB10 1SA E-mail: barrell@sanger.ac.uk Cosmids supplied by Prof. David A. Hopwood, [3] John Innes Centre, Norwich Research Park, Colney, Norwich, Norfolk NR4 7UH, UK

FEATURES (FEAT):

| Feature Key | Location | Qualifier |
|--------------|------------------------|--|
| source | 1..34496 | /organism="Streptomyces coelicolor A3(2)" /strain="A3(2)" /db-xref="taxon:100226" /clone="cosmid F62" |
| misc-feature | complement(17..1123) | /note="Pfam match to entry PF00083 sugar-tr, Sugar (and other) transporter, score -87.50, E-value 0.00097" |
| RBS | complement(1221..1226) | |
| RBS | 1315..1318 | |
| gene | 1325..1927 | /gene="SCF62.02" /note="SCO0376" |
| CDS | 1325..1927 | /gene="SCF62.02" /note="SCF62.02, possible transcriptional regulator, len: 200 aa. Similar to several |

31681 cgggtgcggcg caccctctgc gagcggaacc tggtcgtcgc ccggcgcgtc gaggaccagt
 31741 tcgcccgcgt gaccacggcg ctgttcccgg cgaccgacca cgcacacgcc ctgcgggagg
 31801 caccatgaag gcgaccgaag tgccggagat ctccggcgcg tacctgttcc ggcccacgcc
 31861 gcacgcggac gcacgcggat tcttctgcgg caggttcgac gccgatgtcg tccgtcgggt
 31921 ggggtctcgac ccggccgcct tcgtccagga cagcgtgtcg cgctcgggtc ggggcgtgct
 31981 gcgcggcctg cactgcgtc ccggcgcggg tgaggccaag ctgggtgcgggt gctccaacgg
 32041 gaggatcttc gacgcgcgtc tggacctgcg tgcggactcg ccgacctatc tgggcccggc
 32101 gttcttcgag ctgtccggcg agacgcagac gacctgtac atcccggcg ggtgtgcgca
 32161 cggttccag tcgtgacgg agacctccga cgtctcgtac cggatcgacc gcgcgcacga
 32221 cccggccgag gacgtgacga tcgcttcga cgaccggac ctgcctatcg actggccgct
 32281 gccggtcgcc tcgggtgtccc cccgggacgg ggaggcgccg agcctcgccg acttccctcaa
 32341 gcacagggag ggatgagccc gaagtgaac ccgaagaact cgggtctgcc cggtcgcggc
 32401 aggccaacga gcggctgcac gccctggtcc ccggcggcg gcacacctac gccaaaggcg
 32461 acgaccagta cccggagaac ctggccccgg tgatcagcca cggccgggggt gccacggtgt
 32521 gggacgtcga cggcaaccgc tacgtcagat acggctccgg cctgcgggtcg gtcagcctcg
 32581 gccacgccc cccgcgcgtg acggaggccg tacgacggga gctcgaccgg ggcagcaact
 32641 tcgtccggcc gtccatcgtg gaggtcgacg ccgcggaacg ctctctggcc acgggtgccc
 32701 cggcggagat ggtgaagtcc gcgaagaacg gtcgcgacgc caccacggcg gcggtgcgcc
 32761 tggcccgcgc cgccaccgga cggccccggg tggcgtctg cgccgacct ccgttcttct
 32821 cggtcgacga ctggttcac ggcaaccgc cgatgtcggc cggcattccg gcggcgacca
 32881 acgagctgac cgtggcgttc ccctacggcg acctggccgc caccgaggac ctgctcgccc
 32941 ggcacgagg gcaggtggcc tgcctgatcc tggagcccgc caccacacc gagccgcgcg
 33001 ccggtacact cgcgggtctg cgcgagctgg ccgaccggca cgggtgcgtc ctggtcttcg
 33061 acgagatgat caccgggttc cgggtggtcg aggcggcgcc ccaggccctg tacggcgtgg
 33121 tccccgacct ctccacgttc ggaagagcgc tgggcaacgg gttcgcgcgtc gccgcgtgg
 33181 ccgggcgcgg ggagctgat gagctcggcg gactgcggca ctccggcgac cgggtcttcc
 33241 tgctgtccac caccacggg gcggagacgc acgcgtggc ggccgcgatg gccgtgcagg
 33301 gcacctacgt cgaggagggc gtcaccgcgc ggctgcacgc gctcggcgac cggctggccg
 33361 ccggcgtccg ggaggccgcg gcgagcatgg gtgtcggcga ccacgtcgtc gtccggggcc
 33421 gggccagcaa cctggtcttc gccaccctcg acgagaacgg gcagccgtcg cagcgggtacc
 33481 gcacctgtt cctgcgcaa ctctggcgcg gcggggtgct ggccgcgtcc ttcgtggtga
 33541 cgacgcgct cgcgcacgc gacctgcac acaccgtgga cgtggtggcc gaggcgtgtg
 33601 cgggtgtacc gaaggcgtg gacgcgcgg atcccacgcc ctggatggcc ggacggccgg
 33661 tgaagccggg gttccgcgcg ttggtgtgag gccgggcaaa ccgtggcggg gcgaaccgtg
 33721 gcggggcgac gcggggcgac gtgcccgtcag ctgcccgtg gccgaccggc gtcggccctc
 33781 cgctcggccc gccggtcgca gggcgggccc gccgtccact cgtccggcgg gtgggcccgg
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 34441 agcacgaacc acacgcgcag ccacgacggc agcaccgcgg gcccggccg gccggt

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OHS/MDL NUMBER: OHS95271
 CAS NUMBER: 37290-86-1
 SUBSTANCE: HEPARINASE III
 TRADE NAME/SYNONYM: LYASE, HEPARITIN SULFATE; E.C. 4.2.2.8; HEPARAN MONOSULFATE
 LYASE; HEPARINASEIII FROM FLAVOBACTERIUM HEPARINUM; HEPARIN
 SULFATE ELIMINASE; HEPARITINSULFATE LYASE; OHS95271
 CREATION DATE: Jan 15 1993
 REVISION DATE: Mar 22 2001

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